1003400 A

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 13302 DR [illegible] CHK [illegible]	[illegible]	[illegible]

TABLE I

AGC SUBSYSTEM	AGC SUBSYSTEM NO.	AGC	NAV DSKY	MAIN DSKY	FTM	NAME PLATE INFORMATION (SEE NOTE 2)	
						SERIAL NO.	PART DASH NO.
1003400-	5	1003186	1003458	1003459	1003400-1	RAY 1	—
1003400-1	6	1003186	1003458	1003459	1003400-1	RAY 2	1003400-1
1003400-2	7	1003186	1003458	1003459	1003400-2	RAY 3	1003400-2
1003400-3	8	1003469	1003524	1003540	1003400-3	RAY 4	1003400-3
1003400-3	20	1003469	1003524	1003540	1003400-3	RAY 5	1003400-3
1003400-4	9	1003477	1003524	1003540	1003400-4	RAY 10	1003400-4

NOTE

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. STAMP THE NAMEPLATE ON THE AGC MAIN DSKY AND NAV DSKY WITH PART NUMBER AND SERIAL NUMBER PER TABLE I

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

MASTER

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN [signature] DATE [illegible]
CHECKED [signature] Jan 22 1964
APPROVAL
APPROVAL [signature] 1/23/64
NASA APPROVAL [signature]
MIT APPROVAL
MIT APPROVAL [signature]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

APOLLO GUIDANCE COMPUTER SUBSYSTEMS

CODE IDENT NO. —— SIZE C NASA DRAWING NO. 1003400

SCALE —— WT SHEET 1 OF 1

1003400

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
	10 41		

PART NO.	SYSTEM EFFECTIVITY
-1	BLOCK I, 5,6,7
-2	BLOCK I, 8 AND 20
-3	BLOCK I SYSTEMS 10, 11, 17, 12 & 9
-4	BLOCK I (100 SERIES) SYSTEMS 109, 111, 119, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130 & 131

NOTE

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD -4	QTY REQD -3	QTY REQD -2	QTY REQD -1	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
—	1	—	—	1003477	AGC ASSEMBLY	10
1	—	—	—	1003707	MAIN DSKY ASSY	9
1	—	—	—	1003706	NAV DSKY ASSY	8
1	—	—	—	1003700	AGC ASSEMBLY	7
—	1	1	—	1003540	MAIN DSKY ASSY	6
—	1	1	—	1003524	NAV DSKY ASSY	5
—	—	1	—	1003469	AGC ASSEMBLY	4
—	—	—	1	1003459	MAIN DSKY ASSY	3
—	—	—	1	1003458	NAV DSKY ASSY	2
—	—	—	1	1003186	AGC ASSEMBLY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
Cambridge, Mass.

DRAWN DATE
CHECKED Jan 22/64
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

APOLLO GUIDANCE COMPUTER SUBSYSTEMS

CODE IDENT NO. —— SIZE C NASA DRAWING NO. 1003400
SCALE —— WT SHEET 1 OF 1

MASTER

1003700 A

REVISIONS 10377			
SYM	DESCRIPTION	DATE	APPROVAL
A	REPLACED BY CONFIGURATION DWG. REV B PER TDRR 1234	9/1/64	

QUANTITY	PART NUMBER	DESCRIPTION
16	1003074	LOGIC MODULE A1-A16
18 (1 OF EACH)	1003174	LOGIC MODULE (TABULATED) A17, A18, A21-A38
1	1003165	DRIVER SERVICE MODULE B7
1	1003153	CURRENT SWITCH MODULE B8
1	1003069	ERASABLE MEMORY MODULE B9
2	1003139	ERASABLE DRIVER MODULE B10-B11
1	1003150	POWER SUPPLY MODULE B12
1	1003527	OSCILLATOR MODULE B6
3	1003113	POWER SWITCH MODULE B2-B5
2	1003138	ERASABLE SENSE AMP. MODULE B13-B14
2	1003178	ROPE DRIVER MODULE B32-B33
1	1003167	STRAND GATE MODULE B31
1	1003132	STRAND SELECT MODULE B30
2	1003154	ROPE SENSE AMPLIFIER MODULE B26 OR B27
2	*1003798	INTERFACE MODULE A30 OR A40 (DESIGN LAYOUT CLASS B)
2	*1003799	INTERFACE MODULE A19 OR A39 (DESIGN LAYOUT CLASS B)
1	*1003703	"A" HEADER ASSY. (NOT RELEASED)
1	*1003704	"B" HEADER ASSY. (NOT RELEASED)
1	*1003792	INTERCONNECT HARNESS ASSY.
1	*1003797	FILTER MODULE ASSEMBLY B5

NOTE:
* DENOTES PARTS WHICH ARE INCLUDED IN RETROFIT KIT.

Ⓐ REPLACED BY REV B
(CONFIGURATION DWG)

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

SIGNATURES		DATE
DRAWN	Hagen	6/24/64
CHECKED	[illegible]	6/24/64
DESIGNER	[illegible]	6/25/64
ENGINEER	Edmund Hall	6/25/64
MIT APPROVAL	[illegible]	27 Jun 64
NASA APPROVAL	[illegible]	6/27/64

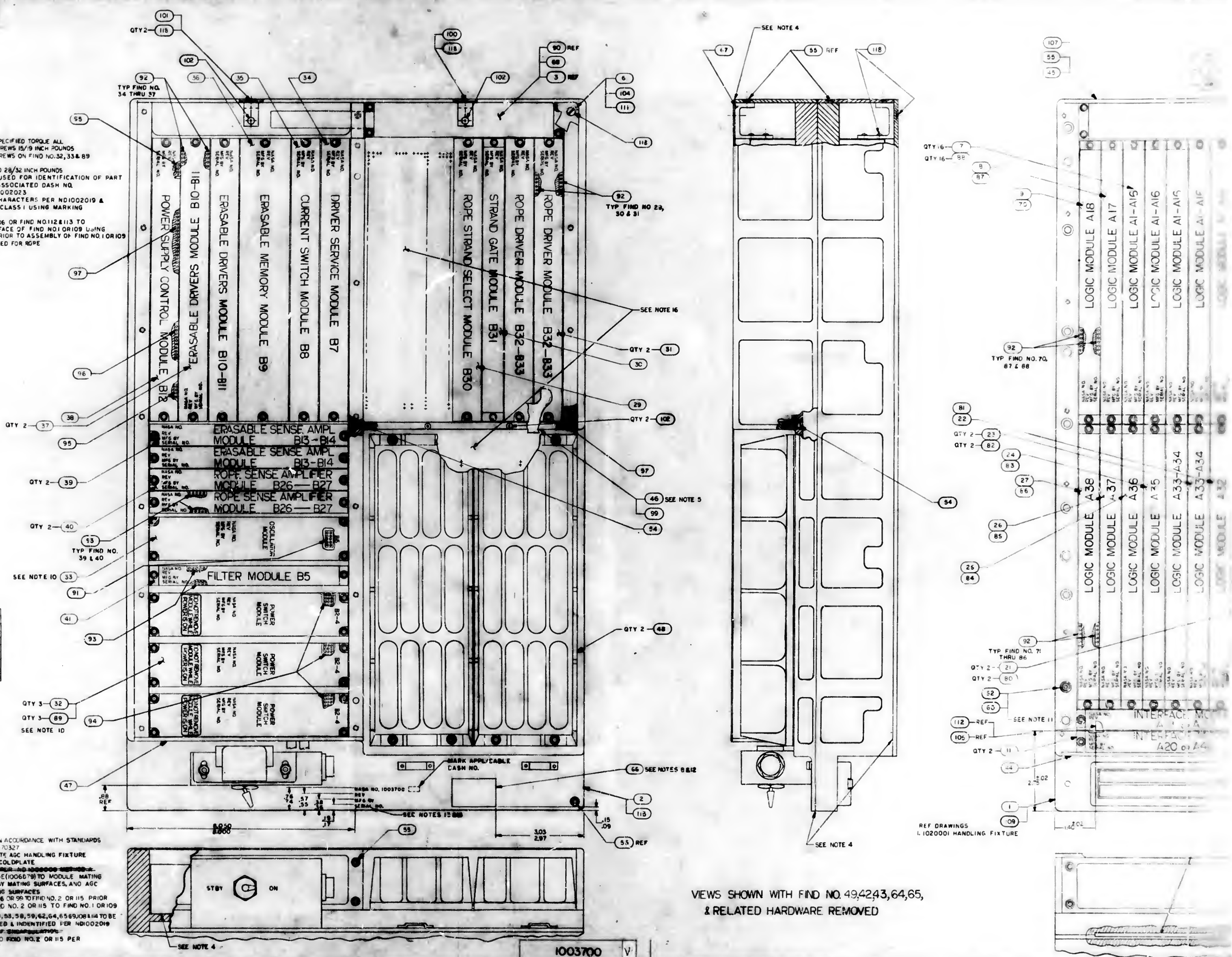
INSTRUMENTATION LABORATORY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASS.

COMPUTER ASSY
WORD DRAWING

CODE IDENT NO.	SIZE	MIT DRAWING NO.
	C	1003700
SCALE	WT	SHEET OF

NOTES (CONT.)

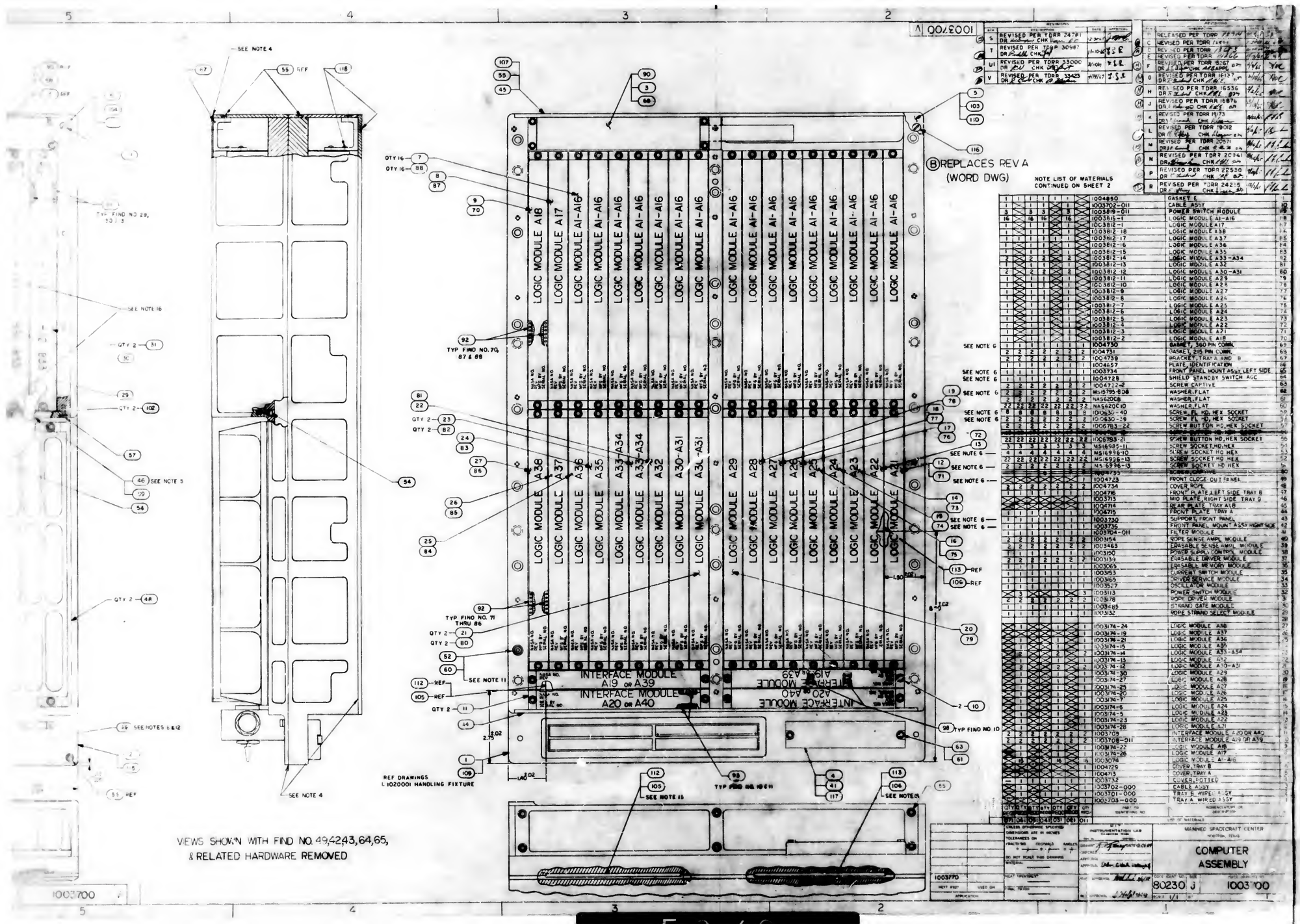
9. UNLESS OTHERWISE SPECIFIED TORQUE ALL MODULE MOUNTING SCREWS 15/19 INCH POUNDS
10. TORQUE MOUNTING SCREWS ON FIND NO.32,33 & 89 TO 4/6 INCH POUNDS
11. TORQUE FIND NO.52 TO 28/32 INCH POUNDS
12. FIND NO.66 TO BE USED FOR IDENTIFICATION OF PART NO.1003770 AND ASSOCIATED DASH NO.
13. SERIALIZE PER ND1002023
14. MARK .08/.10 HIGH CHARACTERS PER ND1002019 & ND1002122 TYPE II CLASS I USING MARKING INK 1006271-11
15. BOND FIND NO.105 & 106 OR FIND NO.112 & 113 TO ENCAPSULATED SURFACE OF FIND NO.1 OR 109 USING MIL-A-5092 TYPE II, PRIOR TO ASSEMBLY OF FIND NO.1 OR 109
16. AREAS NOTED RESERVED FOR ROPE MEMORY MODULES

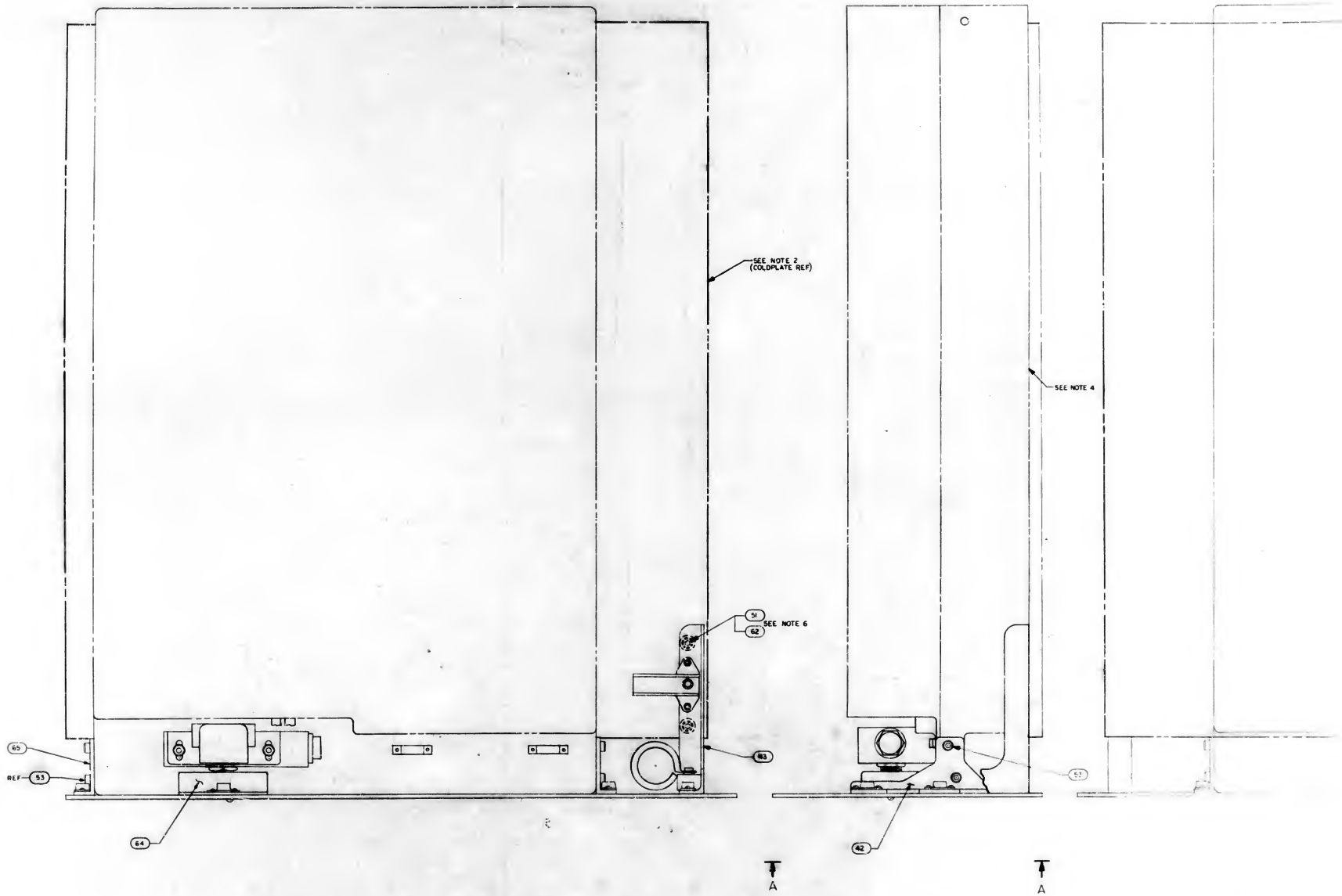


-071	1 THRU 17
-061	1 THRU 16
-051	1 THRU 16
-041	1 THRU 16
-031	1 THRU 16
-021	1 THRU 16
-011	1 THRU 14 & 16
DASH NO.	APPLICABLE NOTES
NOTE APPLICATION	

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D-70327
2. PHANTOM LINES DENOTE AGC HANDLING FIXTURE COLDPLATE OR NAA COLDPLATE
3. ~~POT WITH SILASTIC PER ND [illegible]~~
4. ADD SILICONE GREASE (1006879) TO MODULE MATING METAL SURFACES, TRAY MATING SURFACES, AND AGC TO COLDPLATE MATING SURFACES
5. ASSEMBLE FIND NO 46 OR 99 TO FIND NO. 2 OR 115 PRIOR TO ASSEMBLY OF FIND NO. 2 OR 115 TO FIND NO. 1 OR 109
6. FIND NO 42,43,49,51,53,58,59,62,64,65,69,108 & 114 TO BE SHIPPED UNASSEMBLED & INDENTIFIED PER ND1002019
7. ~~AREAS TO BE FREE OF ENCAPSULATION~~
8. BOND FIND NO. 66 TO FIND NO. 2 OR 115 PER ND1002004 TYPE IV

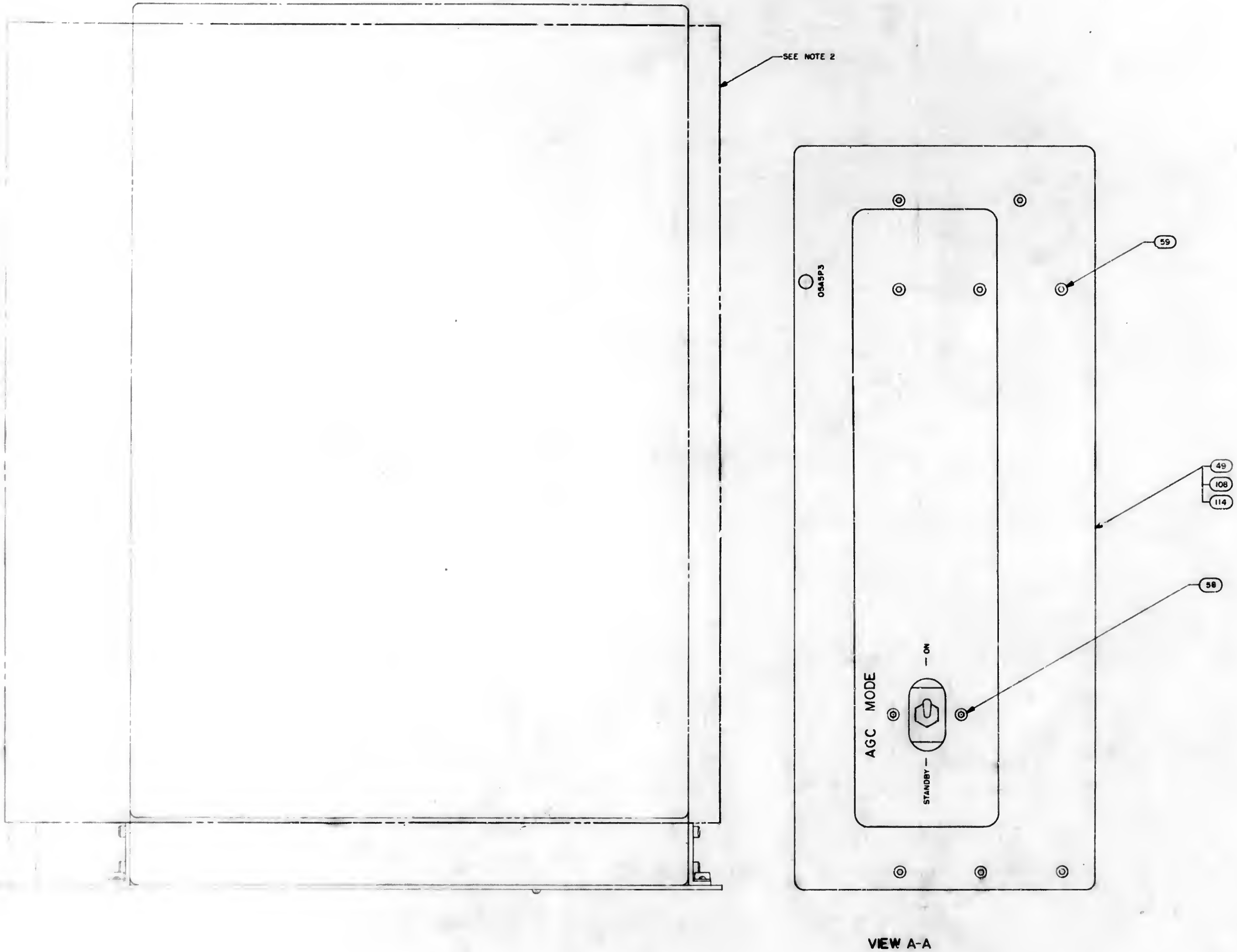

LOGIC MODULE A18
LOGIC MODULE A17
LOGIC MODULE A16
LOGIC MODULE A15
LOGIC MODULE A14
LOGIC MODULE A13
LOGIC MODULE A12
LOGIC MODULE A11
LOGIC MODULE A10
LOGIC MODULE A9
LOGIC MODULE A8
LOGIC MODULE A7
LOGIC MODULE A6
LOGIC MODULE A5
LOGIC MODULE A4
LOGIC MODULE A3
LOGIC MODULE A2
LOGIC MODULE A1
INTERFACE MODULE A19 OR A39
INTERFACE MODULE A20 OR A40
SEE NOTE 4
SEE NOTE 16
SEE NOTE 5
SEE NOTES 6 & 12
SEE NOTE 11
SEE NOTE 15
TYP FIND NO 29, 30 & 31
TYP FIND NO. 71 THRU 86
TYP FIND NO. 79, 87 & 88
TYP FIND NO 10
REF DRAWINGS
1020001 HANDLING FIXTURE
VIEWS SHOWN WITH FIND NO. 49,42,43,64,65, & RELATED HARDWARE REMOVED
REPLACES REV A (WORD DWG)
NOTE LIST OF MATERIALS CONTINUED ON SHEET 2
COMPUTER ASSEMBLY
MANNED SPACECRAFT CENTER
1003700
80230 J


SEE NOTE 2
(COLDPLATE REF)
SEE NOTE 4
51
62
SEE NOTE 6
63
65
REF
53
64
57
42
A
A

1003700 V

1003700 V

LTR	DESCRIPTION	DATE	APPD
B	RELEASED PER TDRR 13304	[illegible]	[illegible]
C	REVISED PER TDRR 13560	[illegible]	[illegible]
D	REVISED PER TDRR 13683	[illegible]	[illegible]
E	REVISED PER TDRR 14266	[illegible]	WR.
F	REVISED PER TDRR 15267 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
G	REVISED PER TDRR 16137 DR [illegible] CHK [illegible]	2/13/65	[illegible]
H	REVISED PER TDRR 16536 DR [illegible] CHK [illegible]	3/2/65	[illegible]
-	REVISED PER TDRR 16676 DR [illegible] CHK [illegible]	[illegible]	[illegible]
K	REVISED PER TDRR 8173 DR [illegible] CHK [illegible]	[illegible]	[illegible]
L	REVISED PER TDRR 19012 DR [illegible] CHK [illegible]	[illegible]	[illegible]
M	REVISED PER TDRR 20571 DR [illegible] CHK [illegible]	[illegible]	[illegible]
N	REVISED PER TDRR 20941 DR [illegible] CHK [illegible]	[illegible]	[illegible]
P	REVISED PER TDRR 22530 DR [illegible] CHK [illegible]	[illegible]	[illegible]
R	REVISED PER TDRR 24235 DR [illegible] CHK [illegible]	[illegible]	[illegible]
S	REVISED PER TDRR 24781 DR [illegible] CHK [illegible]	[illegible]	[illegible]
T	REVISED PER TDRR 30987 DR [illegible] CHK [illegible]	1/10/66	[illegible]
U	REVISED PER TDRR 33000 DR [illegible] CHK [illegible]	3/16/67	[illegible]
V	REVISED PER TDRR 33422 DR [illegible] CHK [illegible]	4/14/67	[illegible]



QTY REQD 071	QTY REQD 061	QTY REQD 051	QTY REQD 041	QTY REQD 031	QTY REQD 021	QTY REQD 011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
47	47	47	47	47	47	X	1006393-003	SCREW, MACHINE, PAN HD	[illegible]
1	X	X	X	X	X	X	1003230-011	TEST CONNECTOR ASSY	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]
1	X	1	X	X	X	X	1003701-011	TRAY B WIRED ASSEMBLY	115
1	X	1	X	X	X	X	1004783-011	FRONT CLOSE-OUT PANEL	114
1	1	1	1	X	X	X	1004774	CUSHION, TRAY A&B	113
1	1	1	1	X	X	X	1004773	CUSHION, TRAY A&B	112
1	1	1	1	X	X	X	1003556-021	COVER, TRAY B	111
1	1	1	1	X	X	X	1003557-021	COVER, TRAY A	110
1	1	1	1	1	1	X	1003703-011	TRAY A WIRED ASSEMBLY	109
X	1	X	1	1	1	X	1004285	FRONT CLOSE-OUT PANEL	108
1	1	1	1	1	1	X	1004762	REAR PLATE, TRAY A & B	107
X	X	X	X	1	1	X	1004766	CUSHION, TRAY A & B	106
X	X	X	X	1	1	X	1004765	CUSHION, TRAY A & B	105
X	X	X	X	1	1	X	1003556-011	COVER, TRAY B	104
X	X	X	X	1	1	X	1003557-011	COVER, TRAY A	103
4	4	4	4	4	4	X	1006783-19	SCREW, BUTTON HD, HEX SOCKET	102
1	1	1	1	1	1	X	1004698-011	BRACKET	101
1	1	1	1	1	1	X	1004768-011	BRACKET	100
1	1	1	1	1	1	X	1003555-011	MID-PLATE, RIGHT SIDE, TRAY B	99
4	4	4	4	4	4	X	1004849-004	GASKET - D	98
1	1	1	1	1	1	X	1004849-003	GASKET - D	97
1	1	1	1	1	1	X	1004849-002	GASKET - D	96
2	2	2	2	2	2	X	1004849-001	GASKET - D	95
3	3	3	3	3	3	X	1004848	GASKET - C	94
18	18	18	18	18	18	X	1004847	GASKET - B	93
90	90	90	90	90	90	X	1004846	GASKET - A	92

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

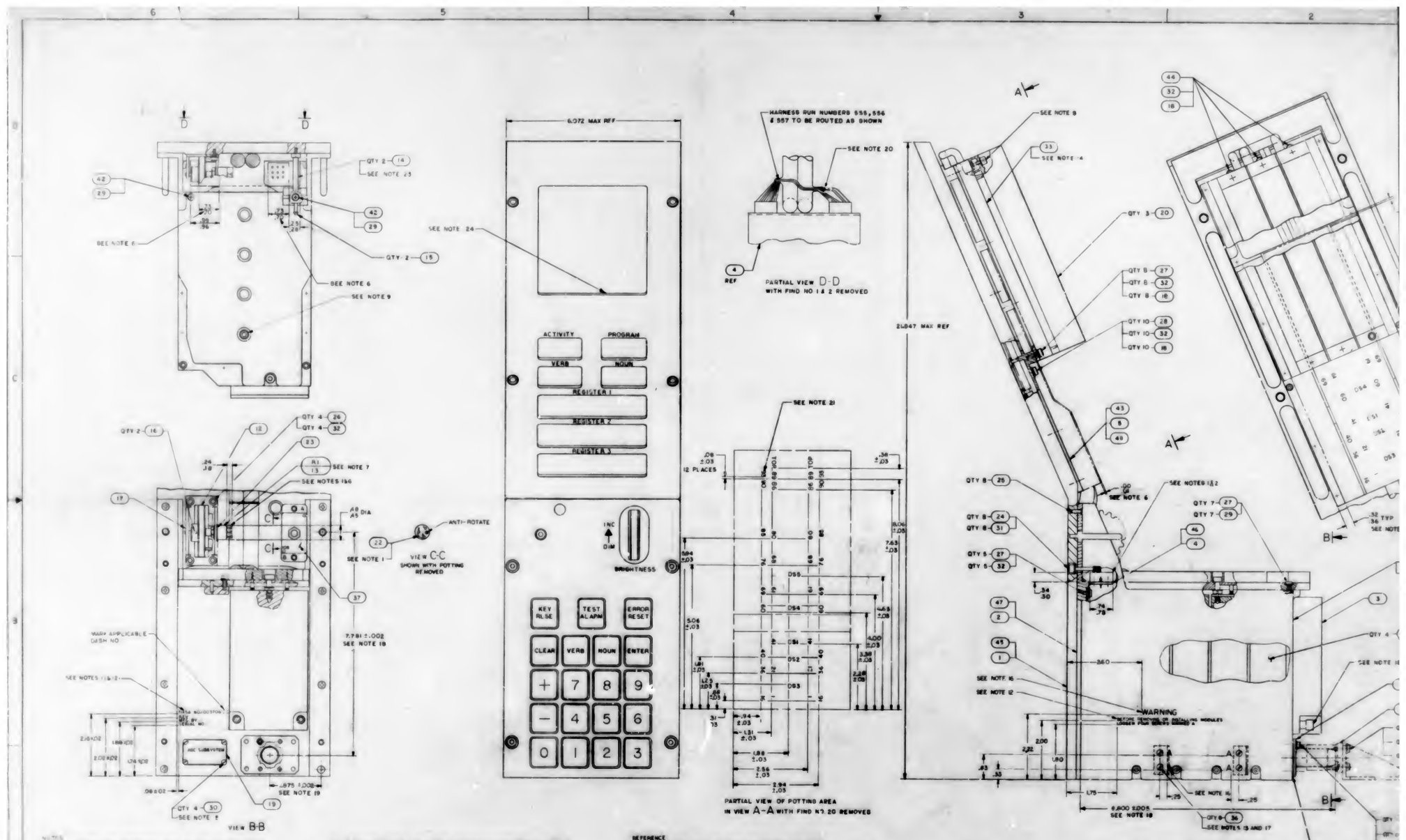
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

COMPUTER ASSEMBLY

CODE IDENT NO 80230 SIZE J 1003700
SCALE 1/1 SHEET 2

1003700 V

[redacted]



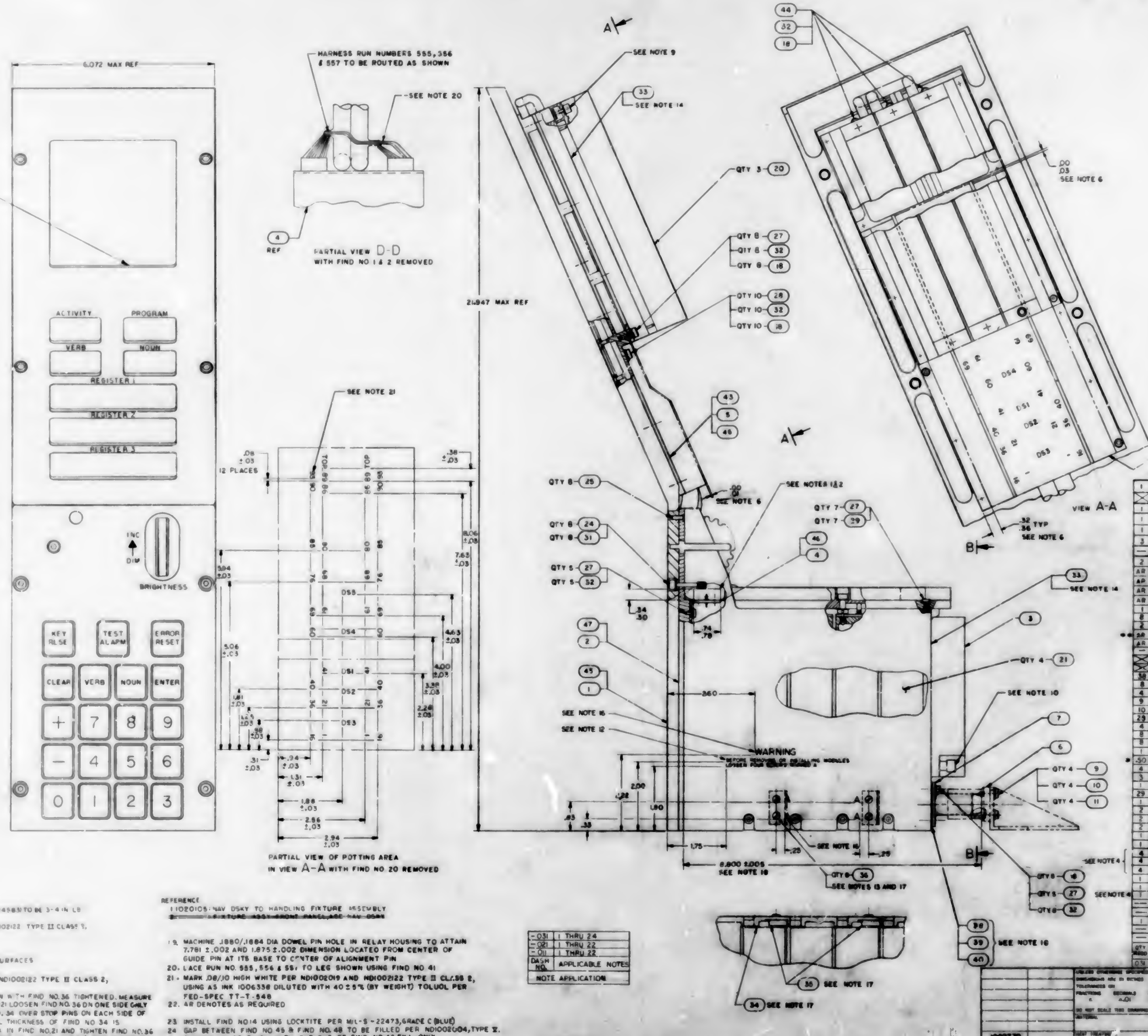
NOTES:

1. SOLDER PER ND1002071 USING SOLDER PER ND1002075
2. WIRE PER ND1002032
3. #26 NOTES LENGTH IN FEET
4. FIND NO 41 & THRU 49 ARE TO BE PACKAGED & IDENTIFIED PER ND1002209
5. SECURE FIND NO 30 USING MIL-S-22473 GRADE H
6. ENCAPSULATE PER ND1002217
7. REMOVE LOCK WASHER FROM FIND NO 13. ADJUST FIND NO 13 TO ACHIEVE 2° 5' BACKOFF ON BRIGHTNESS STOP
8. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
9. MOUNTING TORQUE FOR JACKING SCREWS (1004578) TO BE 15-19 IN LB
10. MOUNTING TORQUE FOR JACKING SCREWS (1004583) TO BE 3-4 IN LB
11. SERIALIZE PER ND1002013
12. MARK .08/.10 HIGH WHITE PER ND1002049 & ND1002122 TYPE II CLASS 2, USING INK 1006271-1
13. MOUNTING TORQUE OF SCREWS "A" TO BE 3.5-4.5 IN.LB
14. APPLY FIND NO.33 TO MODULE MOUNTING SURFACES
15. ⊕ QTY TO BE DETERMINED AT ASSEMBLY
16. MARK .08/.10 HIGH WHITE PER ND1002049 & ND1002122 TYPE II CLASS 2, USING INK 1006271-1
17. INSTALL FIND NO.21 & FIND NO.35 AS SHOWN WITH FIND NO.36 TIGHTENED. MEASURE GAP ON EACH SIDE BETWEEN FIND NO.2 OR 47 & 21. LOOSEN FIND NO.36 ON ONE SIDE ONLY JACK OUT FIND NO.21 AND INSTALL FIND NO. 34 OVER STOP PINS ON EACH SIDE OF FIND NO.21 AS REQUIRED SO THAT THE TOTAL THICKNESS OF FIND NO.34 IS .001/.004 GREATER THAN MEASURED GAP. JACK IN FIND NO.21 AND TIGHTEN FIND NO.36
18. USE FIND NUMBERS 38, 38 & 40 AS REQUIRED TO OBTAIN 6.800 ±.005 DIMENSION
19. MACHINE .3880/.3884 DIA DOWEL PIN HOLE IN RELAY HOUSING TO ATTAIN 7.781 ±.002 AND 1.875 ±.002 DIMENSION LOCATED FROM CENTER OF GUIDE PIN AT ITS BASE TO CENTER OF ALIGNMENT PIN
20. LACE RUN NO. 555, 556 & 557 TO LEG SHOWN USING FIND NO. 41
21. MARK .08/.10 HIGH WHITE PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING AS INK 1006938 DILUTED WITH 40 ± 5% (BY WEIGHT) TOLUOL PER FED-SPEC TT-T-548
22. AR DENOTES AS REQUIRED
23. INSTALL FIND NO.14 USING LOCKTITE PER MIL-S-22473, GRADE C (BLUE)
24. GAP BETWEEN FIND NO.45 & FIND NO.48 TO BE FILLED P.T.P. ND1002004, TYPE II. POTTING TO BE FLUSH WITH CUT-OUT OF FIND NO.45 FILL ONLY PERIMETER OF DSG INDICATOR

REFERENCE
1102010 SI NAV DSKY TO HANDLING FIXTURE ASSEMBLY

-051	1 THRU 24
-061	1 THRU 22
-071	1 THRU 22
DASH NO.	APPLICABLE NOTES
NOTE APPLICATION	

LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 14478 DR [illegible] CHK [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 15112 DR [illegible] CHK [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 20558 DR [illegible] CHK [illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 21508 DR [illegible] CHK [illegible]	[illegible]	[illegible]
E	REVISED PER TDRR 24219 DR [illegible] CHK [illegible]	[illegible]	[illegible]
F	REVISED PER TDRR 24243 DR [illegible] CHK [illegible]	[illegible]	[illegible]
G	REVISED PER TDRR 25317 DR [illegible] CHK [illegible]	[illegible]	[illegible]



REFERENCE

1102010S: NAV DSKY TO HANDLING FIXTURE ASSEMBLY

~~[illegible] FIXTURE ASSY FRONT PANEL, AGC NAV DSKY~~

19. MACHINE .1880/.1884 DIA DOWEL PIN HOLE IN RELAY HOUSING TO ATTAIN 7.781 ±.002 AND 1.875 ±.002 DIMENSION LOCATED FROM CENTER OF GUIDE PIN AT ITS BASE TO CENTER OF ALIGNMENT PIN
20. LACE RUN NO. 555, 556 & 557 TO LEG SHOWN USING FIND NO 41
21. MARK .08/.10 HIGH WHITE PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING AS INK 1006338 DILUTED WITH 40 ± 5% (BY WEIGHT) TOLUOL PER FED-SPEC TT-T-548
22. AR DENOTES AS REQUIRED
23. INSTALL FIND NO 14 USING LOCKTITE PER MIL-S-22473, GRADE C (BLUE)
24. GAP BETWEEN FIND NO 45 & FIND NO. 48 TO BE FILLED PER ND1002004, TYPE II. POTTING TO BE FLUSH WITH CUT-OUT OF FIND NO. 45 FILL ONLY PERIMETER OF DS6 INDICATOR

DASH NO.	APPLICABLE NOTES
-031	1 THRU 24
-021	1 THRU 22
-011	1 THRU 22

NOTE APPLICATION

QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
1	—	—	1003758-021	E/L FRAME & HARNESS ASSY	48
X	—	—	1005788	AGC NAV DSKY OUTLINE DRAWING	REF
1	—	—	1004683	HOUSING RELAY MODULE	47
1	—	—	1003806-011	KEYBOARD MODULE ASSY	46
1	—	—	1004873	PANEL FRONT	45
3	3	—	MS51957-17	SCREW, PAN HEAD	44
—	1	—	1003758-011	E/L FRAME & HARNESS ASSY	43
2	2	2	MS51957-14	SCREW, PAN HEAD	42
AR	AR	AR	1012507-003	TAPE, LACING	41
AR	AR	AR	1004836-003	SHIM	40
AR	AR	AR	1004836-002	SHIM	39
AR	AR	AR	1004836-001	SHIM	38
1	1	1	1010182-3	GASKET	37
8	8	8	MS51957-13	SCREW, PAN HEAD	36
2	2	2	1004666-011	STIFFENER	35
AR	AR	AR	1004665	SHIM	34
AR	AR	AR	1006879	COMPOUND, THERMALLY CONDUCTIVE	33
—	X	X	1003900-01	AGC NAV DSKY OUTLINE DRAWING	REF
X	X	X	1005771	INTERCONNECTION FLOW DIAGRAM	REF
X	X	X	1005150	INTERCONNECTION DIAGRAM	REF
38	38	38	MS15795-803	WASHER FLAT	32
8	8	8	MS15795-808	WASHER FLAT	31
4	4	4	MS16200-1	SCREW PAN HEAD	30
9	9	9	NAS620C4	WASHER, FLAT	29
10	10	13	MS16995-11	SCREW, SOCKET HEAD	28
29	28	28	MS16995-10	SCREW, SOCKET HEAD	27
4	4	4	MS16995-9	SCREW, SOCKET HEAD	26
8	8	8	MS51959-14	SCREW, FLAT HEAD	25
8	8	8	1004545	SCREW, CAPTIVE	24
1	1	1	1004644	WASHER, KNURLED	23
.50	.50	.50	QQ-W-343 TYPE S	WIRE, SOLID AWG 26	22
4	4	4	1003824-011	RELAY MODULE ASSY	21
3	3	3	1003817-011	DECODING MODULE ASSY	20
1	1	1	1004628	PLATE, IDENT	19
29	29	29	MS35337-78	WASHER, LOCK	18
1	1	1	1004648	BRACKET, POTENTIOMETER	17
2	2	2	MS51053-213	SCREW, SET	16
2	2	2	MS16633-4012	RING, RETAINING	15
2	2	2	1004115	STUD, CONNECTOR	14
1	1	1	1006736	RESISTOR, VARIABLE	13
1	1	1	1003473	THUMB WHEEL ASSY	12
4	4	4	MS16995-26	SCREW, SOCKET HEAD	11
4	4	4	MS15795-807	WASHER, FLAT	10
4	4	4	MS35337-80	WASHER, LOCK	9
1	1	1	1004670	BRACKET, ANGLE	8
1	1	1	1003823-011	ALIGNMENT PIN ASSY	7
1	1	1	1004668	FLANGE	6
—	—	1	1003758-000	E/L FRAME & HARNESS ASSY	5
—	1	1	1003806-000	KEYBOARD MODULE ASSY	4
1	1	1	1003811	POWER SUPPLY	3
—	1	1	1004671	HOUSING, RELAY MODULE	2
—	1	1	1004756	PANEL, FRONT	1

LIST OF MATERIALS

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

HOUSTON, TEXAS

AGC NAV DSKY ASSY

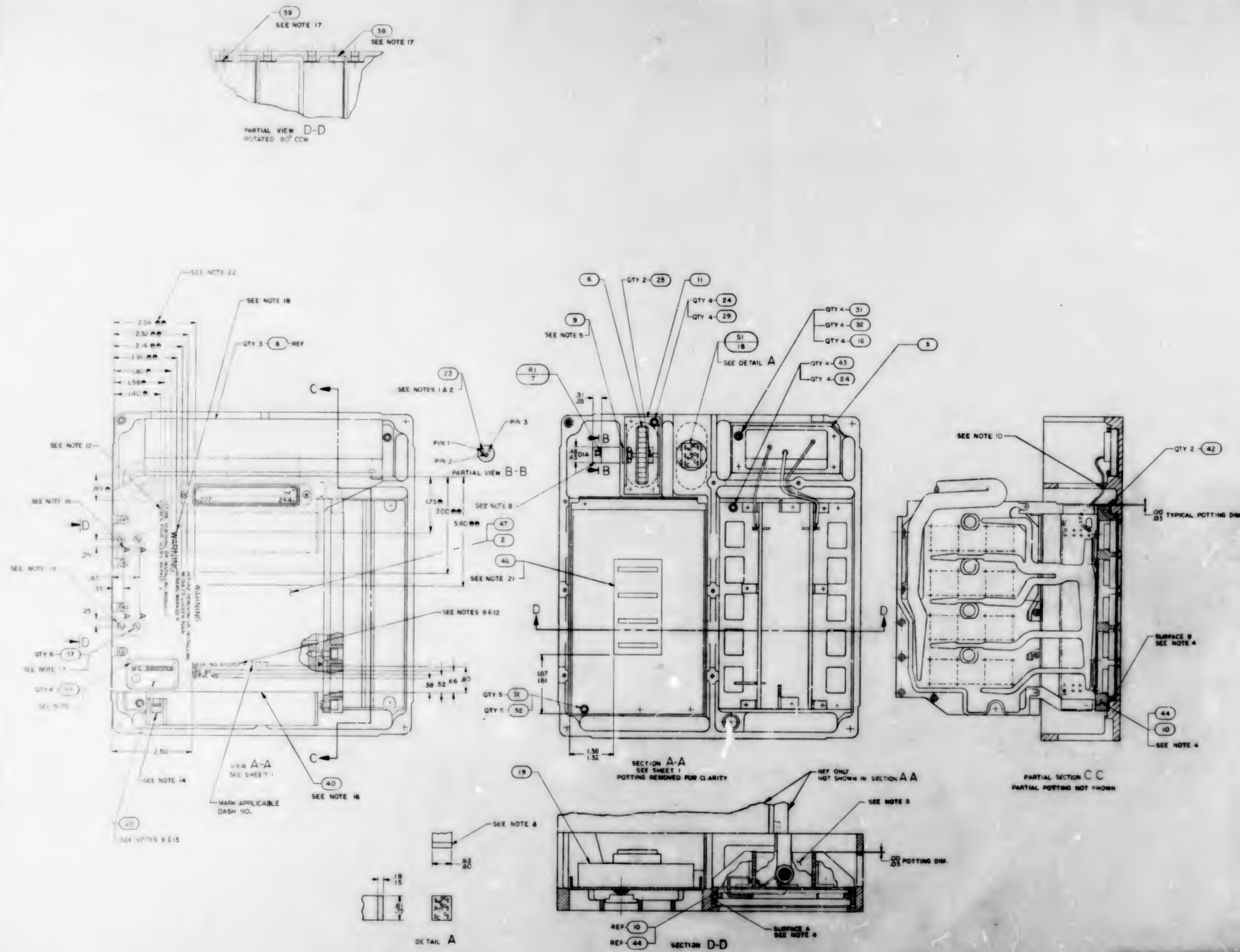
100 SERIES

NEXT ASSY: 1000770

CODE IDENT NO 80230 | SIZE J | DRAWING NO 1003706

SCALE 1/1 | SHEET 1 OF 1

	Rev	Description
	A	REVISED PER TDRR 151[illegible]7 DR [illegible] CHK [illegible] APPD
	B	REVISED PER TDRR 20558 DR [illegible] CHK [illegible]
	C	REVISED PER TDRR 2[illegible]63 DR [illegible] CHK [illegible] APPD
	D	REVISED PER T[illegible]RR 213[illegible]8 DR [illegible] CHK [illegible]
	E	REVISED PER TDRR 22453 DR [illegible] CHK [illegible]
	F	REVISED PER TDRR 24219 DR [illegible] CHK [illegible]
	G	REVISED PER TDRR 24[illegible]43 DR [illegible] CHK [illegible] APPD



QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
–	X	X	1003480	AGC MAIN DSKY OUTLINE
X	X	X	1005770	INTERCONNECTION FLOW DIAG
X	X	X	1005753	INTERCONNECTION DIAGRAM
X	–	–	1005789	AGC MAIN DSKY OUTLINE
1	X	X	1004686	HOUSING, RELAY TRAY
1	X	X	1004779	PAD, RUBBER
1	X	X	1004682	HOUSING, FRONT
1	1	X	1003609-011	E/L FRAME & HARNESS ASSY
4	4	4	1011625-32	SCREW, SOCKET HEAD
2	2	2	1004[illegible]	SHIM
1	1	1	1010812-1	GASKET
AR	AR	AR	1006879	THERMOCONDUCTIVE COMPOU
AR	AR	AR	1004565	SHIM
2	2	2	1004666-011	STIFFENER
8	8	8	MS51957-13	SCREW, PAN HEAD
9	9	9	MS15795-805	WASHER, FLAT
X	4	4	MS15795-808	WASHER, FLAT
2	2	2	MS51959-18	SCREW, FLAT HEAD
4	4	4	MS51957-1	SCREW, PAN HEAD
13	13	13	MS15795-804	WASHER, FLAT
16	16	16	MS16995-10	SCREW, SOCKET HEAD
1	1	1	MS16995-13	SCREW, SOCKET HEAD
12	12	12	MS16995-9	SCREW, SOCKET HEAD
3	3	3	MS16995-17	SCREW, SOCKET HEAD
4	4	4	MS16995-16	SCREW, SOCKET HEAD
[illegible]	4	4	[illegible]	SCREW, CAPTIVE
2	2	2	MS51033-213	SCREW, SET
18	18	[illegible]	MS15795-803	WASHER, FLAT
AR	AR	AR	QQ-W-343 TYPE S	WIRE, SOLID AWG 26
1	1	1	MS25281-2	CLAMP, CABLE
1.5	1.5	1.5	1012507-003	LACING, CORD
1	1	1	1004628	PLATE, DENT
1	1	1	1003554-011	KEYBOARD MODULE, DIB
1	1	1	1006820-000	SWITCH, TOGGLE
7	7	7	NAS620-C4	WASHER, FLAT
6	6	6	MS35337-78	WASHER, LOCK
1	1	1	MS35338-79	WASHER, LOCK
2	2	2	MS35649-44	NUT, PLAIN
1	1	1	MS35649-64	NUT, PLAIN
2	2	2	MS16995-11	SCREW, SOCKET HEAD
1	1	1	1004648	BRACKET, POT
X	X	1	1003809-000	E/L FRAME & HARNESS ASSY
1	1	1	1004644	WASHER, KNURLED
3	3	3	1003817-011	DECODING MODULE ASSY
1	1	1	10067[illegible]	RESISTOR, VARIABLE
1	1	1	10034[illegible]	THUMB WHEEL ASSY
1	1	1	1004873	FRAME INDICATOR
4	4	4	1003824-011	RELAY MODULE ASSY
1	1	1	1003811-011	POWER SUPPLY ASSY
X	1	1	1004[illegible]72	HOUSING, RELAY TRAY
X	1	1	100[illegible]	HOUSING, FRONT PANEL

LIST OF MATERIALS

NEXT ASSY	1003770
USED ON	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON DECIMALS ±.02
DO NOT SCALE THIS DRAWING

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

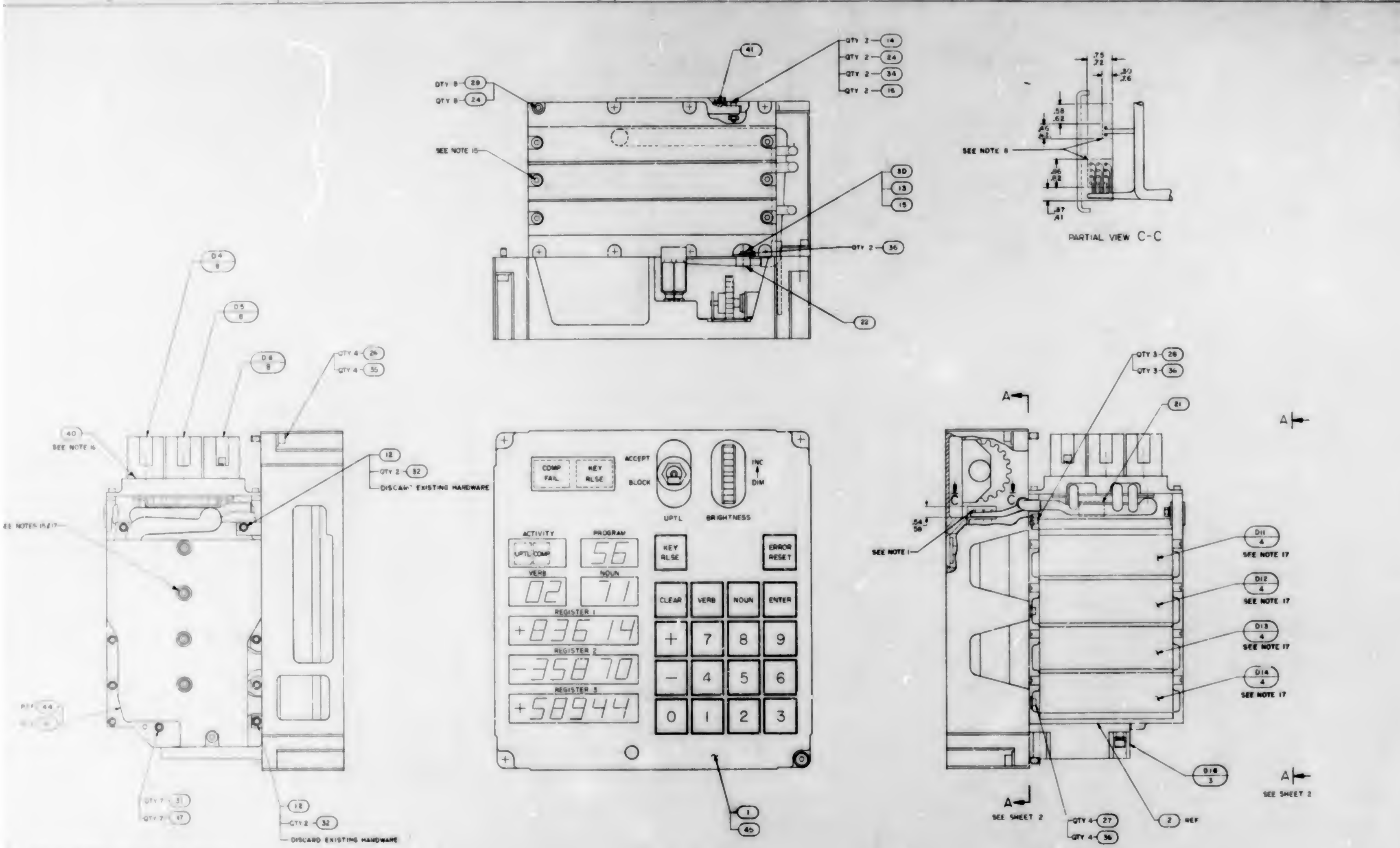
AGC MAIN DSKY AS[SY]
100 SERIES

CODE IDENT NO.	SIZE	DWG NO.
80230	J	100370[7]

SCALE 1/1

MASTER

REV	REVISIONS
A	REVISED PER TDRR 15107
B	REVISED PER TDRR 20558
C	REVISED PER TDRR
D	REVISED PER TDRR
E	REVISED PER TDRR 22493
F	REVISED PER TDRR 24219
G	REVISED PER TDRR 242-3



NOTES

1. SOLDER PER ND1002071 USING SOLDER PER ND1002075
2. ... PER ND1002032
3. ... DRAWING IN ACCORDANCE WITH STANDARDS ... BY M... 27
4. ... FIND NO 44 TO BUTT AGAINST SURFACES A&B GAP CAUSED ... TOLERANCES OF DETAILS PERMISSIBLE
5. ... WASHER FROM FIND NO. 7 ADJUST FIND NO 7 TO A ... 2 TO 3 BACKOFF
6. ... IN FEET
7. ... FIND NO 33 USING MIL-S-22473 GRADE H
8. ... PER NO ...
9. ... PER ...
10. BOND ... OF FIND NO 10 OR FIND NO 44 TO FIND NO.1 OR FIND NO. 45 PER ND1002004 TYPE V
11. * * QTY TO BE DETERMINED AT ASSEMBLY
12. MARK .08/.10 HIGH WHITE PER ND1002019 & ND1002122 TYPE II CLASS I ... MARKING INK 1006271-1
13. FIND NO.2 ... TO BE USED FOR IDENTIFICATION OF PART NO.1003770 AND APPLICABLE DASH NO.
14. MOUNTING TORQUE OF JACKING SCREWS 1004583, TO BE 3-4 IN.LBS
15. MOUNTING TORQUE OF JACKING SCREWS (1004579) TO BE 15-19 IN.LBS
16. APPLY ... TO MODULE MOUNTING SURFACE
17. INSTALL FIND NO.4 ... 38 AS SHOWN WITH FIND NO.37 TIGHTENED, MEASURE GAP ON EACH SIDE BETWEEN FIND NO.2 & 4, LOOSEN FIND NO.37 ON ONE SIDE ONLY. ... OUT FIND NO.4 AND INSTALL FIND NO.39 OVER STOP PINS ON EACH SIDE OF FIND NO. 4 AS REQUIRED SO THAT THE TOTAL THICKNESS OF FIND NO.39 IS .001/.004 GREATER THAN MEASURED GAPS. ... IN FIND NO.4 AND TIGHTEN FIND NO.37
18. MARK .18/.20 HIGH WHITE PER ND1002019 & ND1002122 TYPE II CLASS I USING MARKING INK 1006271-1
19. MOUNTING TORQUE ON SCREWS MARKED 'A' TO BE 35-45 IN.LBS
20. AR DENOTES AS REQUIRED

21. BOND FIND NO. 46 TO FIND NO. 19 PER ND1002004 TYPE V
22. ◐◑ INDICATES MARKING DIM. FOR -031 ONLY
◐ INDICATES MARKING DIM. FOR -011 & -021 ONLY

REFERENCES
1. 1020106 DSKY TO HANDLING FIXTURE ASSY

FOR LIST OF MATERIALS SEE SHEET 2

MASTER

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MIT INSTRUMENTATION LAB

AGC MAIN DSKY ASSY
BLOCK I 100 SERIES

80230 J 1003707

SCALE 1/1 SHEET 1

REVISIONS					
ZONE	LTR	DESCRIPTION	DR	CHK	DATE	APPROVED
	N	REVISED PER TDRR 31515				

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
K		REPLACES REV J WITH CHANGES PER TDRR 24841				
L		REVISED PER TDRR 27326			4/6/66	
M		CHANGED PER TDRR 29702			6/29/66	

ITEM NO.	NAME PLATE INFO: AGC SUB-SYS PART NO.	NAME PLATE INFO: CONFIGURATION SERIAL NO.	AGC SYS NO. (REF)	COMPUTER PART NO.	NOV DSKY PART NO.	MAIN DSKY PART NO.	G/N DETECT MOD PART NO.	ISDT SPECIFICATION	RETROFIT KIT NO.	REMARKS
1	1003770-011	RAY 110 120 130	120 117 112	1003700-011	1003551	1003484-011		FTH 1003770		INITIAL DESIGN
2	1003770-021	RAY 140	110	1003700-031	1003706-011	1003707-011		FTH 1003770		NEW DSKY DESIGN, LMA-37, VIB CUSHIONS
3	1003770-031	RAY 170 180	121 111	1003700-021	1003706-011	1003707-011		FTH 1003770		FLIGHT QUALIFIED MICROLOGIC
4	1003770-041	RAY 150	100	1003700-011	1003524	1003540		RIB 0104029	8104045	RETROFIT AGC 0 TO 100
5	1003770-051	RAY 195	107	1003700-011	1003524	1003553-011		RIB 0104033	8104048	RETROFIT AGC 20 TO 107 - UNMANNED S/C SIGNALS
6	1003770-061	RAY 190 170 180	109 121 111	1003700-041 1003700-041	1003706-011 1003706-011	1003707-011 1003707-011		FTH 1003770 RIB 0104041	8104087	IMPROVED VIBRATION DAMPENING MATERIAL
7	1003770-071	RAY 120 130	117 112	1003565-011	1003570-011	1003569-011		RIB 0104060	8104120	UPDATE TO NEW ICD REQUIREMENTS
8	1003770-081	RAY 200	122	1003700-041	1003706-021	1003707-021		FTH 1003770		IMPROVED E/L LIGHTS
9	1003770-091	RAY 205, 170 210, 180 220, 190 225, 200	SP#1, 121 123, 111 124, 109 SP#2, 122	1003700-051	1003706-031	1003707-031		FTH 1003770		NEW ICD REQUIREMENTS, VIBRATION CLOSE-OUT PANEL GAND 0 VOLTS
10	1003770-101	RAY 140	110	1003700-061	1003706-011	1003707-011		RIB 0104041	8104087	IMPROVED VIBRATION DAMPENING MATERIAL
11	1003770-111	RAY 110	120	1003565-031	1003570-021	1003564-011	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
12	1003770-121	RAY 150	100	1003700-011	1003524	1003561-011	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
13	1003770-131	RAY 120 130	117 112	1003565-011	1003570-011	1003564-021	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
14	1003770-141	RAY 190 170 180	109 121 111	1003700-041	1003706-011	1003563-011	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
15	1003770-151	RAY 200	122	1003700-041	1003706-021	1003563-021	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY

(K) REPLACES REV J WITH CHANGE

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN	Raul Machado	13 Dec 65
CHECKED		
APPROVED		
APPROVED		
APPROVED MIT		
APPROVED MSC	A.C. METZGER	

APOLLO GUIDANCE COMPUTER GROUP

CODE IDENT NO.	SIZE	DRAWING NO.
80230	C	1003770

DATE | SCALE NONE | SHEET 1 OF 2

1003770 N

MODERN BLUE PRINT CO. D-19550

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REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
K		THIS SHEET ADDED PER TDRR 24841				
L		REVISED PER TDRR 27326			4/6/66	
M		REVISED PER TDRR 29702			6/9/66	
N		REVISED PER TDRR 31515			12/21/66	

ITEM NO.	NAME PLATE INFO: AGC SUB-SYS PART NO.	NAME PLATE INFO: CONFIGURATION SERIAL NO.	AGC SYS NO. (REF)	COMPUTER PART NO.	NAV DSKY	MAIN DSKY PART NO.	G/N DETECT MOD PART NO.	TEST SPECIFICATION	RETROFIT KIT NO.	REMARKS
16	1003770-161	RAY 205, 170 210, 180 220, 190 225, 200	SP#1, 121 123, 111 124, 109 SP#2 122	1003700-051	1003706-031	1003563-031	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
17	1003770-171	RAY 140	110	~~1003700-011~~ ~~1003700-021~~ 1003565-041	~~1003706-011~~ ~~1003577-011~~ 1003577-021	~~1003563-011~~ ~~1003576-011~~ 1003576-021	1003220-011	RIB 0104049	8104088	G&N FAILURE DETECT ASSY
18	1003770-181	RAY 110	120	~~1003700-011~~ 1003565-031	1003570-021	1003569-021		~~FTN 1003770~~ 0104068	8104098 8104099	UPDATE TO NEW ICD REQUIREMENTS THERMAL TEST COVER
19	1003770-191	RAY 140	110	1003565-021	1003577-011	1003576-011		FTN 1003770	8104178	NEW IDC REQUIREMENTS GRD 0 VOLTS, POWER SWITCH MODULES
20	1003770-201	RAY 140	110	1003565-041	1003577-021	1003576-021		RIB 0104078	8104208	UPDATE TO VIB. FIXES, NEW FRONT CLOSE OUT PANEL, GUIDE PINS

(K) THIS SHEET ADDED

1003770 N

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON

APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN Raul Machado 13 Dec 65
CHECKED
APPROVED
APPROVED

APPROVED MIT
A. C. HETZGER
APPROVED MSC
DATE

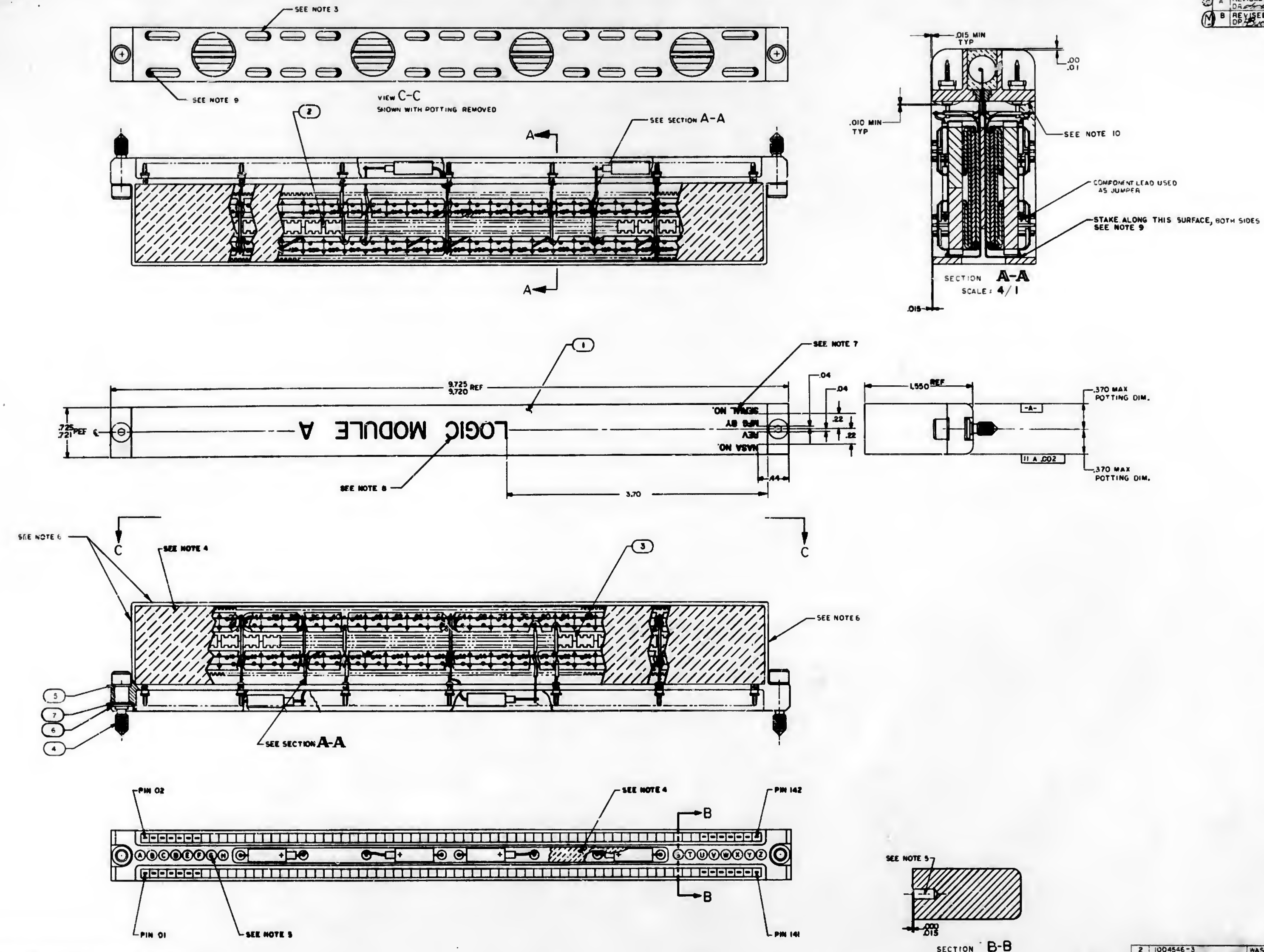
APOLLO GUIDANCE COMPUTER GROUP

CODE IDENT NO.	SIZE	DRAWING NO.
80230	C	1003770

SCALE NONE | SHEET 2 OF 2

MODERN BLUE PRINT CO. D-19550

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 16353 DR [illegible] CHK [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 16956 DP [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]



NOTES:

1. INTERPRET DWG IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND 1002005 & ND 1002003
3. POTTING MATERIAL IN SLOTS AND HOLES TO BE .005 ABOVE FLUSH TO .010 BELOW FLUSH
4. ENCAPSULATE WITH POLYURETHANE FOAM PER ND 1002002 (BLACK)
5. FILL KEYING POSITIONS INDICATED BY CHART WITH THERMALLY CONDUCTIVE EPOXY RESIN PER ND 1002188. DO NOT EVACUATE AFTER FILLING
6. SPRAY COAT TOP SURFACE AND ENDS PER ND 1002040 FLAT BLACK
7. MARK .08/.10 HIGH WHT PER ND1002015 AND ND 1002122 TYPE II CLASS I, SERIALIZE PER ND1002023, USING MARKING INK 1006271-1
8. MARK .24/.26 HIGH WHT PER ND 1002019 AND ND 1002122 TYPE II CLASS I. USING MARKING INK 1006271-1
9. STAKE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002004, TYPE II FLOW STAKING COMPOUND PARTIALLY INTO SLOTS
10. SEAL INSULATORS & TERMINALS TO HEADER PER ND 1002004 TYPE III
11. WORKMANSHIP, FABRICATION AND INSPECTION REQUIREMENTS PER ND 1002069 EXCEPT TWIST LEADS AS SHOWN

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1004546-3	WASHER, FLAT	7
2	MS-16633-4[illegible]	RING, RETAINING, EXTERNAL "E"	6
2	1004546-1	WASHER, FLAT	5
2	1004579-1	SCREW, JACKING	4
1	SEE CHART	MICRO LOGIC MODULE SUB-ASSY (EVEN)	3
1	SEE CHART	MICRO LOGIC MODULE SUB-ASSY (ODD)	2
1	1003810	HEADER HOUSING ASSEMBLY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
1003700	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± — DECIMALS ±.XX ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB Cambridge, Mass.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

LOGIC MODULE ASSY (TABULATED)

SIZE E — DRAWING NO 1003812

SCALE 2/1 — SHEET 1 OF 2

MODULE NO.	PART NO.	REV	EVEN	ODD	REF FLOW	REF WIRING	KEY POSITIONS
A17	1003812-1	B	1003813-2	1003814-2	1006543	1006123	ACDESTUY
A18	1003812-2		1003813-3	1003814-3	1006542	1006122	AFGHVWXY
A21	1003812-3		1003813-4	1003814-4	1006536	1006136	AEFGUVWY
A22	1003812-4		1003813-5	1003814-5	1006553	1006133	ACDFSTVY
A23	1003812-5		1003813-6	1003814-6	1006545	1006125	ACDGSTWY
A24	1003812-6		1003813-7	1003814-7	1006555	1006135	ACDHSTXY
A25	1003812-7		1003813-8	1003814-8	1006554	1006134	ACEFSUVY
A26	1003812-8		1003813-9	1003814-9	1006549	1006129	ACEGSUWY
A27	1003812-9		1003813-10	1003814-10	1006544	1006124	ACEHSUXY
A28	1003812-10		1003813-11	1003814-11	1006552	1006132	ACFGSVWY
A29	1003812-11		1003813-12	1003814-12	1005763	1005761	ACFHSVXY
A30-A31	1003812-12		1003813-13	1003814-13	1006548	1006128	ACGHSWXY
A32	1003812-13		1003813-14	1003814-14	1006546	1006126	ADEGTUWY
A33-A34	1003812-14		1003813-15	1003814-15	1006547	1006127	ADEHTUXY
A35	1003812-15		1003813-16	1003814-16	1006541	1006121	ADFGTVWY
A36	1003812-16		1003813-17	1003814-17	1006557	1006137	ADFHTVXY
A37	1003812-17		1003813-18	1003814-18	1006550	1006130	ADGHTWXY
A38	1003812-18	B	1003813-19	1003814-19	1006551	1006131	AEFHUVXY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 16353 DR. [illegible] CHK [illegible]	5/29/67	
B	REVISED PER TDRR 16956 DR. [illegible] CHK [illegible] APPD [illegible]	11/9/67	

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINISH

NEXT ASSY | USED ON

APPLICATION

M.I.T. INSTRUMENTATION LAB

DRAWN [illegible] DATE 2-28-67

CHECKED [illegible]

APPROVAL

APPROVAL [illegible]

NASA APPROVAL [illegible] 2-28-67

QUALITY APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

LOGIC MODULE ASSY (TABULATED)

CODE IDENT NO. —

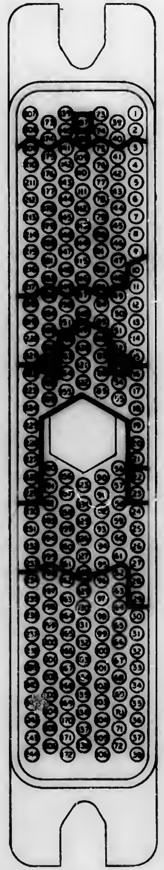
SIZE E

NASA DRAWING NO. 1003812

SCALE — WT —

SHEET 2 OF 2

REVISIONS 12777			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TORR 13323		
B	REVISED PER TORR 135[illegible]		WR



MALE PLUG
CONTACT SIDE

Pin	Assignment
207	168
208	170
209	247
210	214 SIG
211	214 RET.
212	221 SIG.
213	221 RET.
214	228 SIG.
215	228 RET
216	235 SIG
217	235 RET
218	201 SIG
219	201 RET
220	208 SIG
221	208 RET
222	161
223	
224	162
225	
226	163
227	
228	164
229	
230	110 SIG.
231	110 RET.
232	122 SIG.
233	122 RET.
234	
235	116 SIG.
236	116 RET.
237	128 SIG.
238	128 RET.
239	144 SIG.
240	144 RET.
241	151 SIG
242	151 RET.
243	
244	NOT AVAILABLE FOR USE

Pin	Assignment
173	239
174	240
175	215 SIG.
176	215 RET.
177	222 SIG.
178	222 RET.
179	229 SIG.
180	229 RET.
181	236 SIG.
182	236 RET.
183	202 SIG.
184	202 RET
185	210 SIG.
186	210 RET.
187	250
188	160
189	
190	111 SIG
191	111 RET.
192	123 SIG.
193	123 RET.
194	134 SIG.
195	134 RET.
196	
197	117 SIG.
198	117 RET.
199	129 SIG.
200	129 RET.
201	145 SIG.
202	145 RET
203	152 SIG.
204	152 RET.
205	183 SIG
206	183 RET

Pin	Assignment
139	168
140	170
141	213
142	216 SIG.
143	216 RET.
144	223 SIG.
145	223 RET.
146	230 SIG.
147	230 RET.
148	237 SIG.
149	237 RET.
150	203 SIG.
151	203 RET.
152	158
153	
154	159
155	
156	108 SIG.
157	108 RET.
158	124 SIG.
159	124 RET.
160	135 SIG.
161	135 RET.
162	
163	114 SIG.
164	114 RET.
165	130 SIG.
166	130 RET.
167	146 SIG.
168	146 RET.
169	153 SIG.
170	153 RET.
171	199 SIG
172	NOT AVAILABLE FOR USE

Pin	Assignment
107	245
108	241
109	217 SIG.
110	217 RET.
111	224 SIG.
112	224 RET.
113	231 SIG.
114	231 RET.
115	238 SIG.
116	238 RET.
117	204 SIG.
118	204 RET.
119	101-166
120	
121	165-010
122	
123	109 SIG.
124	109 RET.
125	132 SIG.
126	132 RET.
127	136 SIG.
128	136 RET.
129	
130	115 SIG.
131	115 RET.
132	139 SIG.
133	139 RET.
134	147 SIG.
135	147 RET.
136	154 SIG.
137	154 RET.
138	199 RET

Pin	Assignment
73	167
74	169
75	212
76	218 SIG.
77	218 RET.
78	225 SIG.
79	225 RET.
80	232 SIG.
81	232 RET.
82	242 SIG.
83	242 RET.
84	205 SIG.
85	205 RET.
86	162
87	
88	103
89	
90	
91	
92	133 SIG.
93	133 RET.
94	137 SIG.
95	137 RET.
96	175
97	131 SIG.
98	131 RET.
99	140 SIG.
100	140 RET.
101	148 SIG.
102	148 RET.
103	155 SIG.
104	155 RET.
105	056 SIG
106	NOT AVAILABLE FOR USE

Pin	Assignment
39	251
40	243
41	219 SIG.
42	219 RET.
43	226 SIG.
44	226 RET.
45	233 SIG.
46	233 RET.
47	244 SIG.
48	244 RET.
49	167
50	157
51	168
52	168
53	178
54	104
55	
56	118 SIG.
57	118 RET.
58	119 SIG.
59	119 RET.
60	138 SIG.
61	138 RET.
62	176
63	177
64	126 SIG.
65	126 RET.
66	142 SIG.
67	142 RET.
68	149 SIG.
69	149 RET.
70	156 SIG.
71	156 RET.
72	056 RET

Pin	Assignment
1	167
2	169
3	211
4	220 SIG.
5	220 RET.
6	227 SIG.
7	227 RET.
8	234 SIG.
9	234 RET.
10	248
11	249
12	209 SIG.
13	209 RET.
14	207 SIG.
15	207 RET.
16	105
17	
18	106
19	
20	107
21	
22	179
23	180
24	120 SIG.
25	120 RET.
26	121 SIG.
27	121 RET.
28	141 SIG.
29	141 RET.
30	127 SIG.
31	127 RET.
32	143 SIG.
33	143 RET.
34	150 SIG.
35	150 RET.
36	157 SIG.
37	157 RET.
38	157 T

CABLE GROUP I NOT SHIELDED

CABLE GROUP II SHIELDED

CABLE GROUP III SHIELDED

CABLE GROUP IV SHIELDED

CABLE GROUP V SHIELDED

CABLE GROUP 'I NOT SHIELDED

NOTE
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1005707	
NEXT ASSY	USED ON
APPLICATION	

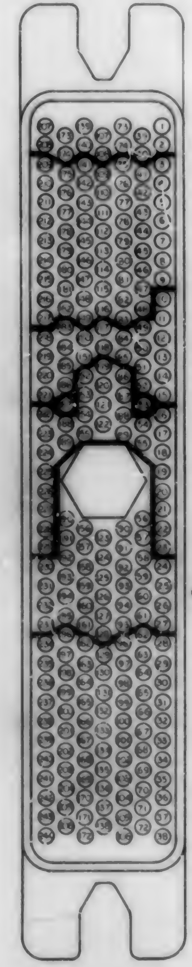
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, Cambridge, Mass.
DRAWN [illegible] DATE [illegible]
CHECKED [illegible]
APPROVAL
APPROVAL [illegible]
NASA APPROVAL [illegible] 9-22-64
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SIGNAL PIN ASSIGNMENT
OSASPI CONNECTOR-(ASC TOP SA)

CODE IDENT NO. — SIZE D NASA DRAWING NO 10C5716
SCALE NONE WT SHEET 1 OF 1



Pin	Assignment
1	NOT AVAILABLE FOR USE
2	NOT AVAILABLE FOR USE
3	211
4	220 SIG
5	220 RET
6	227 SIG
7	227 RET
8	234 SIG
9	234 RET
10	248
11	249
12	
13	
14	
15	
16	54 SIG
17	
18	54 RET
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	ERROR DETECT LIGHT
29	S/C LAMP TEST
30	
31	ROLL ERROR OFFSET LO
32	ROLL ERROR BODY HI
33	YAW ERROR BODY HI
34	YAW ERROR SHLD
35	PITCH ERROR LO
36	PITCH ERROR HI
37	
38	NOT AVAILABLE FOR USE
39	239
40	243
41	219 SIG
42	219 RET
43	226 SIG
44	226 RET
45	233 SIG
46	233 RET
47	244 SIG
48	244 RET
49	206 SIG
50	206 RET
51	246 SIG
52	246 RET
53	
54	R87
55	R86
56	17 SHLD NC
57	
58	
59	
60	
61	
62	UVDC SP CRAFT (26 RET)
63	IMU TEMP LIGHT
64	
65	
66	ROLL ERROR OFFSET HI
67	ROLL ERROR SHLD
68	YAW ERROR OFFSET HI
69	YAW ERROR BODY LO
70	PITCH ERROR SHLD
71	NOT AVAILABLE FOR USE
72	
73	NOT AVAILABLE FOR USE
74	
75	212
76	218 SIG
77	218 RET
78	225 SIG
79	225 RET
80	232 SIG
81	232 RET
82	242 SIG
83	242 RET
84	205 SIG
85	205 RET
86	067
87	007
88	066
89	180
90	17 SIG
91	17 RET
92	26 SIG
93	
94	11 SIG
95	11 RET
96	[illegible] AL LOCK LIGHT
97	MIN IMPULSE + YAW
98	MIN IMPULSE - YAW
99	MIN IMPULSE TOG SW
100	MIN IMPULSE ENABLE
101	S/C WARN LIGHT
102	S/C CAUT LIGHT
103	LOCK CDU RELAY CONT
104	FINE ALIGN RELAY CONT
105	
106	NOT AVAILABLE FOR USE
107	245
108	241
109	217 SIG
110	217 RET
111	224 SIG
112	224 RET
113	231 SIG
114	231 RET
115	238 SIG
116	238 RET
117	204 SIG
118	204 RET
119	068
120	004
121	005
122	058
123	24 SIG
124	24 RET
125	25 SIG
126	25 RET
127	
128	11 SHLD NC
129	
130	MIN IMPULSE YAW
131	MIN IMPULSE + ROLL
132	MIN IMPULSE EN RET
133	
134	+28 VDC SPACECRAFT
135	
136	IMU MODE RELAY COMM
137	NOT AVAILABLE FOR USE
138	
139	NOT AVAILABLE FOR USE
140	
141	213
142	216 SIG
143	216 RET
144	223 SIG
145	223 RET
146	230 SIG
147	230 RET
148	237 SIG
149	237 RET
150	203 SIG
151	203 RET
152	040
153	060
154	065
155	
156	14 SHLD NC
157	24 SHLD NC
158	15 SHLD NC
159	25 SHLD NC
160	16 SHLD NC
161	
162	
163	MIN IMPULSE + PITCH
164	MIN IMPULSE - ROLL
165	MIN IMPULSE ROLL
166	SIN ADG 1X LO(S2)
167	SIN ADG 1X HI(S4)
168	SIN AMG 1X LO(S2)
169	SIN AMG 1X HI(S4)
170	SIN AIG 1X LO(S2)
171	SIN AIG 1X HI(S4)
172	NOT AVAILABLE FOR USE
173	251
174	240
175	215 SIG
176	215 RET
177	222 SIG
178	222 RET
179	229 SIG
180	229 RET
181	236 SIG
182	236 RET
183	202 SIG
184	202 RET
185	210 SIG
186	210 RET
187	250
188	
189	
190	14 SIG
191	14 RET
192	15 SIG
193	15 RET
194	16 SIG
195	16 RET
196	
197	MIN IMPULSE - PITCH
198	MIN IMPULSE PITCH
199	COS ADG 1X HI(S3)
200	COS ADG 1X LO(S1)
201	COS AMG 1X HI(S3)
202	COS AMG 1X LO(S1)
203	COS AIG 1X LO(S1)
204	COS AIG 1X HI(S3)
205	NOT AVAILABLE FOR USE
206	
207	NOT AVAILABLE FOR USE
208	
209	247
210	214 SIG
211	214 RET
212	221 SIG
213	221 RET
214	228 SIG
215	228 RET
216	235 SIG
217	235 RET
218	201 SIG
219	201 RET
220	208 SIG
221	208 RET
222	
223	
224	1 SIG
225	1 SHLD NC
226	1 RET
227	
228	
229	
230	
231	
232	
233	
234	
235	
236	
237	
238	
239	
240	
241	
242	IMU 28V 800CPS LO
243	IMU 28V 800CPS HI
244	NOT AVAILABLE FOR USE

CABLE GROUP I NOT SHIELDED

CABLE GROUP II SHIELDED

CABLE GROUP III SHIELDED

CABLE GROUP IV NOT SHIELDED

CABLE GROUP V SHIELDED

CABLE GROUP VI

MALE RECEPTACLE
CONTACT SIDE
NORMAL POLARIZATION

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.
NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	DO NOT SCALE THIS DRAWING
MATERIAL	HEAT TREATMENT
FINAL FINISH	
NEXT ASSY: 1005707	USED ON
APPLICATION	
MIT INSTRUMENTATION LAB	MANNED SPACECRAFT CENTER, HOUSTON, TEXAS
DRAWN	CHECKED
APPROVAL	NASA APPROVAL
MIT APPROVAL	

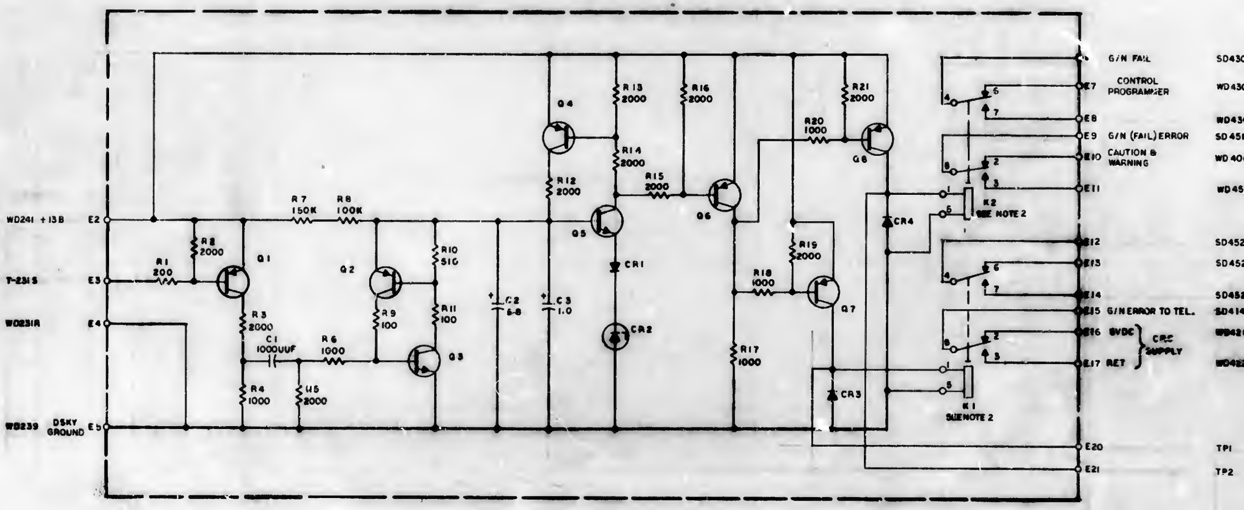
SIGNAL PIN ASSIGNMENT
05A5P3 CONNECTOR (G&N TO C/M)

CODE IDENT NO.	SIZE	NASA DRAWING NO.
——	D	1005717

SCALE NONE WT SHEET 1 OF 1

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 20410	[illegible]	[illegible]	[illegible]	[illegible]
B		REVISED PER TDRR 21345	[illegible]	[illegible]	[illegible]	[illegible]

REVISIONS 18286



REF DES	PART NO.	DESCRIPTION	VALUE	TOL	RATING
R1	1006750 - 15	RESISTOR	200	±2%	1/4 W
R2	- 39		2000		
R3	- 39		2000		
R4	- 32		1000		
R5	- 39		2000		
R6	- 32		1000		
R7	- 84		150K		
R8	- 80		100K		
R9	- 8		100		
R10	- 25		510		
R11	- 8		100		
R12	- 39		2000		
R13	- 39		2000		
R14	- 39		2000		
R15	- 39		2000		
R16	1006750 - 39		2000		1/4W
R17	1006760 - 32		1000		1/2W
R18	1006750 - 32		1000		1/4W
R19	- 39		2000		
R20	- 32		1000		
R21	1006750 - 39	RESISTOR	2000	±2%	1/4 W
C1	1006753 - 7	CAPACITOR	1000UUF	±2%	[illegible]
C2	1006755 - 79	CAPACITOR	6.8	±10%	35VDC
C3	1006755 - 59	CAPACITOR	1.0	±10%	35VDC
CR1	1006751	DIODE			
CR2	1005838	DIODE			
CR3	1006751	DIODE			
CR4	1006751	DIODE			
Q1	1006753	TRANSISTOR			
Q2	1006753				
Q3	1006752				
Q4	1006753				
Q5	1006752				
Q6	1006753				
Q7	1006753				
Q8	1006753	TRANSISTOR			
K1	1006815 - 2	RELAY			
K2	1006815 - 2	RELAY			

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. RELAY SHOWN IN THE POSITION THAT INDICATE FAIL (DEENERGIZED)

REF DWG:
G & N FAILURE DETECT ASSY
DWG - NO. 1003220

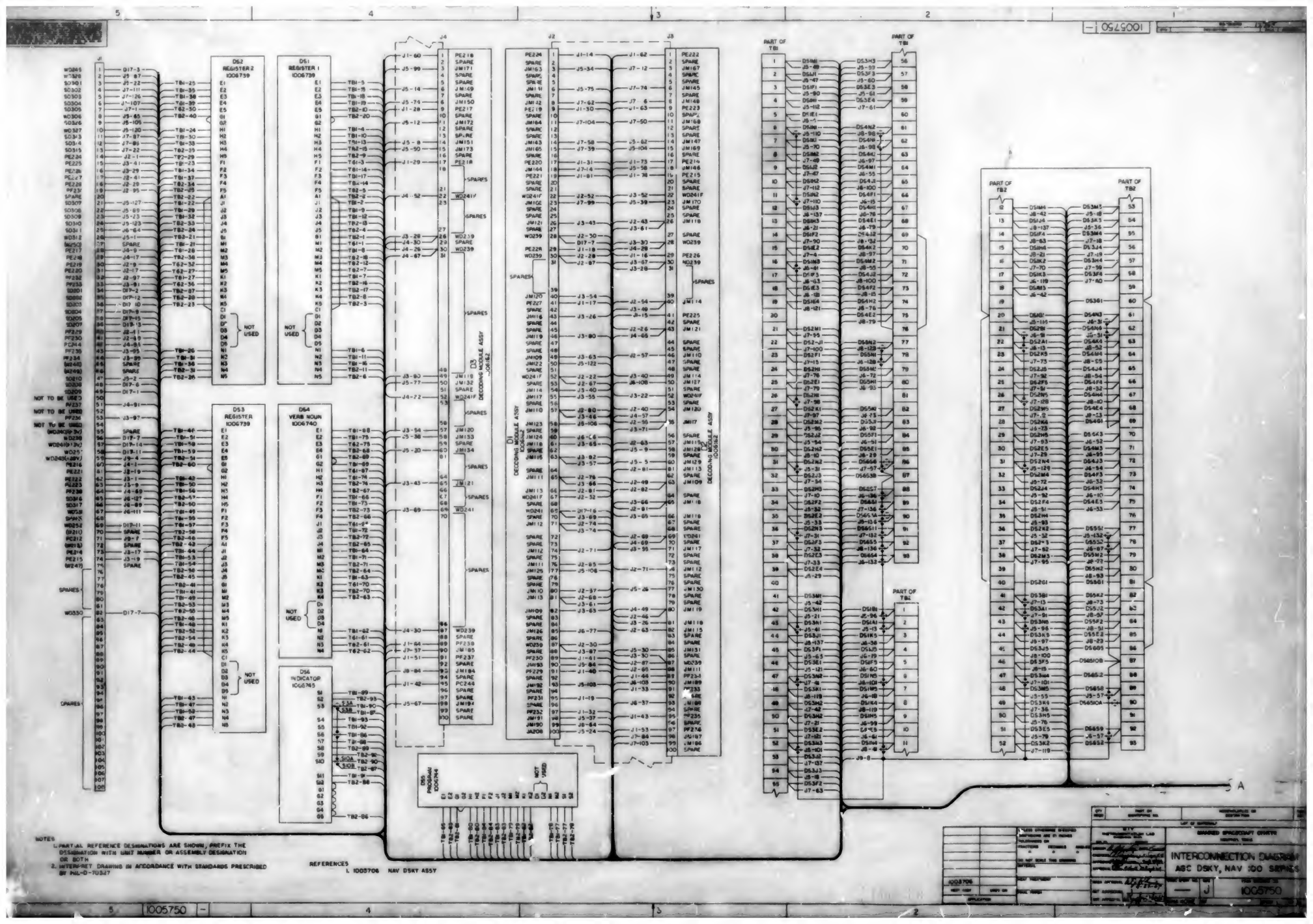
MIT INSTRUMENTATION LAB

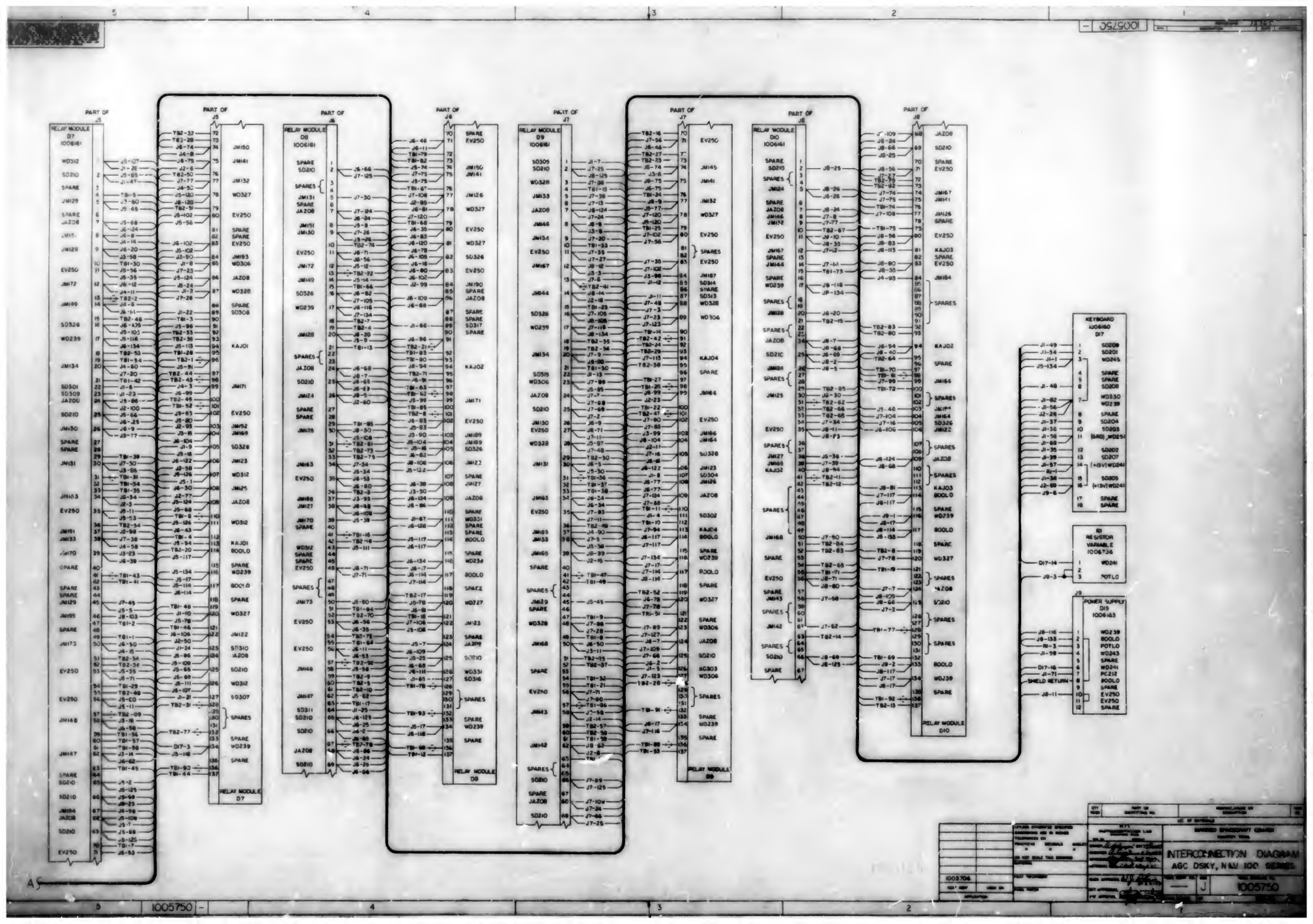
MANNED SPACECRAFT CENTER

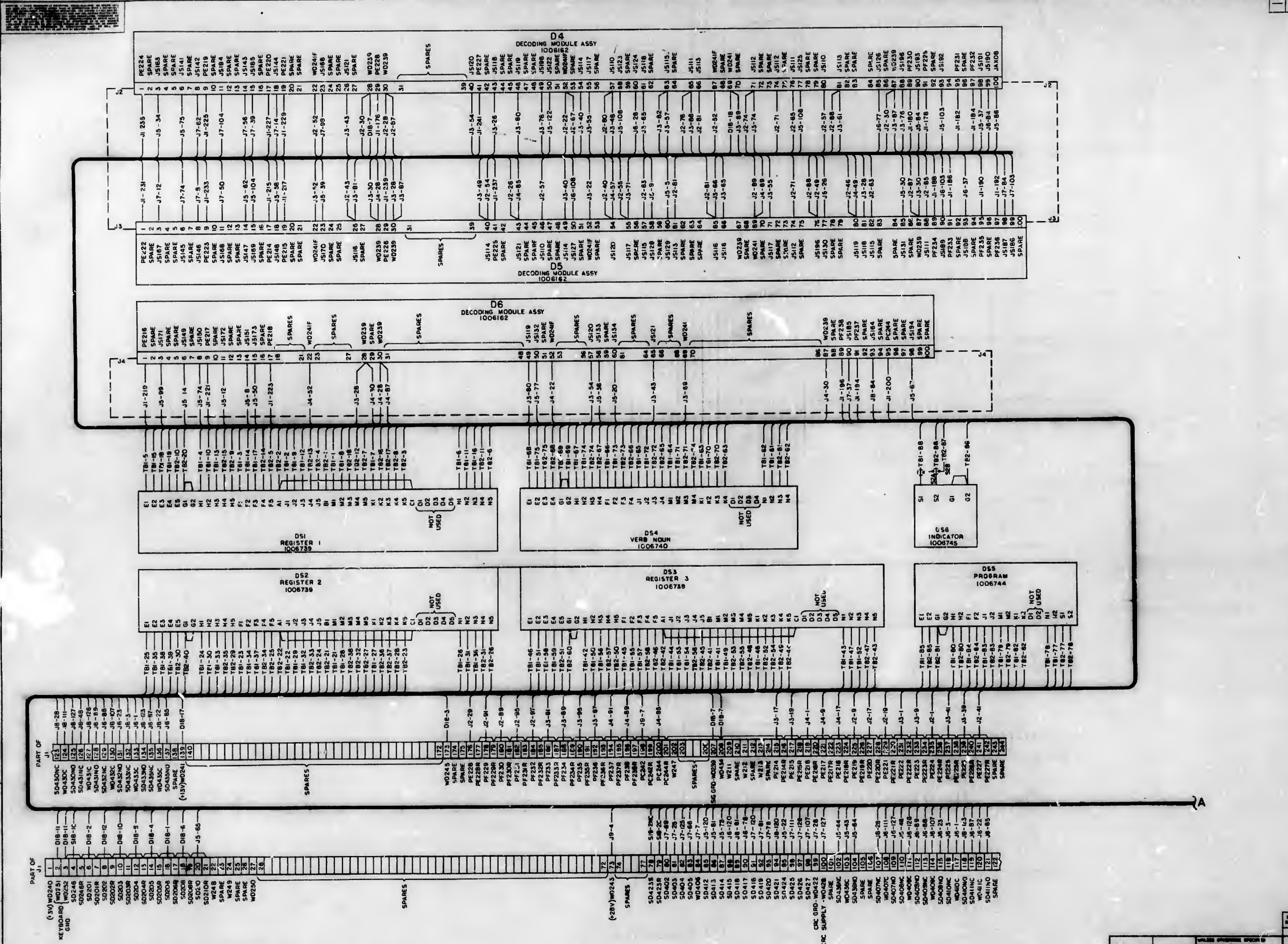
SCHEMATIC,
G & N FAILURE DETECT

SIZE E

1005730


DS2 REGISTER 2 1006739
DS1 REGISTER 1 1006739
DS3 REGISTER 1006739
DS4 VERB NOUN 1006740
DS6 INDICATOR 1006765
DS5 PROGRAM 1006744
NOT USED
D1 DECODING MODULE ASSY 1006842
D2 DECODING MODULE ASSY 1006842
D3 DECODING MODULE ASSY 1006842
PART OF TB1
PART OF TB2
SPARES
NOTES:
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN, PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
2. INTERFACE DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY PAL-D-70327
REFERENCES
1. 1005706 NAV DSKY ASSY
INTERCONNECTION DIAGRAM ASC DSKY, NAV 300 SERIES
1005750
J
A

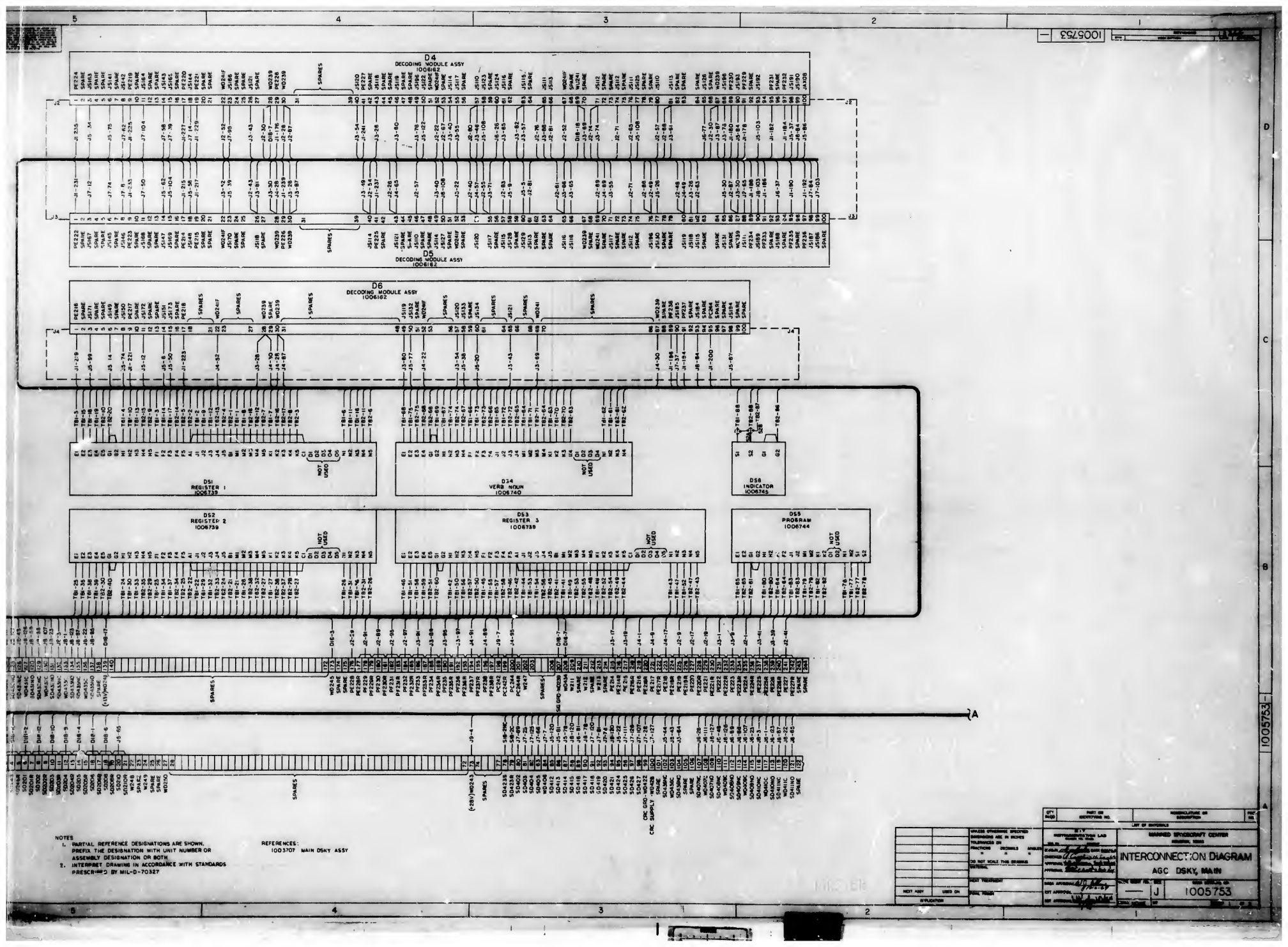

INTERCONNECTION DIAGRAM
AGC DSKY, NAV 100 SERIES
1005750
RELAY MODULE D7
RELAY MODULE D8
RELAY MODULE D9
RELAY MODULE D10
KEYBOARD 1006660 DI7
RESISTOR VARIABLE 1006736
POWER SUPPLY DI9 1006163

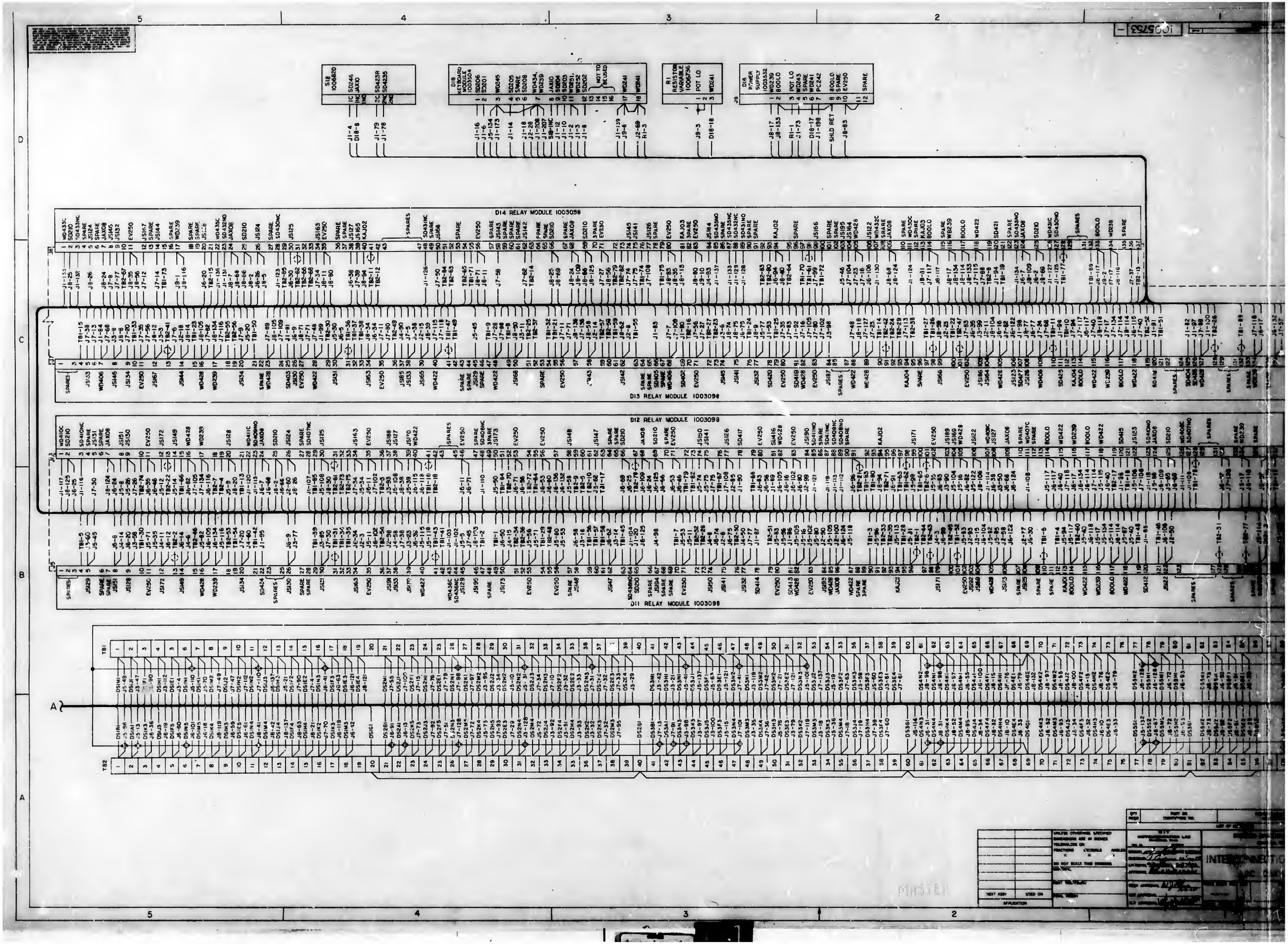


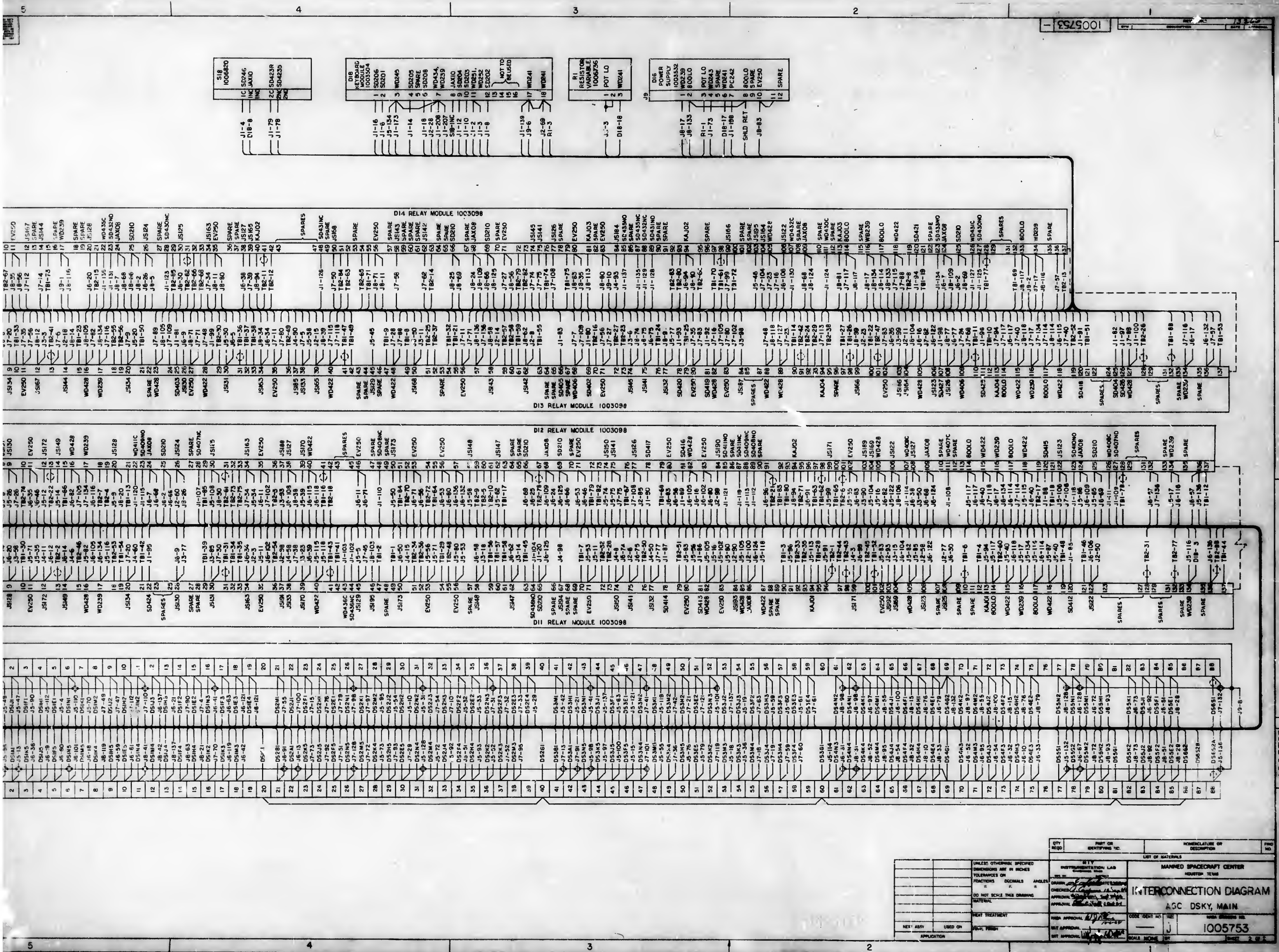
NOTES

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

REFERENCES:
1003707 MAIN DSKY ASSY


1005753
D4
DECODING MODULE ASSY
1006162
D5
DECODING MODULE ASSY
1006162
D6
DECODING MODULE ASSY
1006162
D51
REGISTER 1
1006739
D52
REGISTER 2
1006739
D53
REGISTER 3
1006739
D54
VERB NOUN
1006740
D55
PROGRAM
1006744
D56
INDICATOR
1006745
SPARES
NOT USED
A
NOTES
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
REFERENCES:
1003707 MAIN DSKY ASSY
MANNED SPACECRAFT CENTER
INTERCONNECTION DIAGRAM
AGC DSKY, MAIN
1005753
J


1005753
S18 1006820
D18 KEYBOARD MODULE 1003504
NOT TO BE USED
R1 RESISTOR VARIABLE 1006736
D16 POWER SUPPLY 1003532
D14 RELAY MODULE 1003098
D13 RELAY MODULE 1003098
D12 RELAY MODULE 1003098
D11 RELAY MODULE 1003098
TB1
TB2
MASTER
INTERCONNECTION


1005753
D14 RELAY MODULE 1003098
D13 RELAY MODULE 1003098
D12 RELAY MODULE 1003098
D11 RELAY MODULE 1003098
LIST OF MATERIALS
MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
HOUSTON TEXAS
INTERCONNECTION DIAGRAM
AGC DSKY, MAIN
1005753

1005756 -

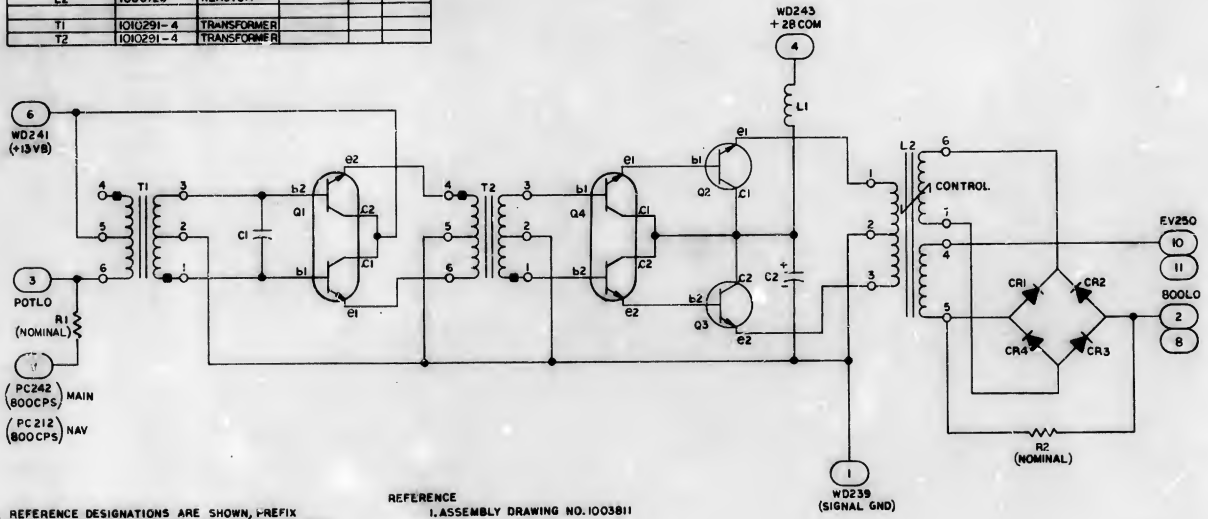
REVISIONS 1667

SYM	DESCRIPTION	DATE	APPROVAL

REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
R1	1006750	RESISTOR	SEE TABLE	±2%	1/4W
R2	1006750	RESISTOR	SEE TABLE	±2%	1/4W
C1	1006793-19	CAPACITOR	.0033	±2%	500V
C2	1006755-134	CAPACITOR	22	±10%	50 VDC
Q1	1010376-1	TRANSISTOR	SEE NOTE 3		
Q2	1010269-2	TRANSISTOR			
Q3	1010269-2	TRANSISTOR			
Q4	1010376-1	TRANSISTOR			
CR1	1006751	DIODE			
CR2	1006751	DIODE			
CR3	1006751	DIODE			
CR4	1006751	DIODE			
L1	1010406-7	COIL	8.2UH		
L2	1006726	REACTOR			
T1	1010291-4	TRANSFORMER			
T2	1010291-4	TRANSFORMER			

R1	
PART NO.	VALUE
1006750 -41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
1006750 -48	4700

R2	
PART NO.	VALUE
1006750 -19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750 -36	1500



NOTES
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN, PREFIX THEM WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. Q2 AND Q3 ARE MATCHED PAIRS
4. RESISTORS ARE IN OHMS UNLESS OTHERWISE SPECIFIED
5. CAPACITORS ARE IN UFD UNLESS OTHERWISE SPECIFIED

REFERENCE
1. ASSEMBLY DRAWING NO. 1003811

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

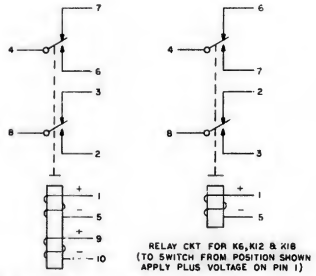
MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE 5/9/68
CHECKED [illegible]
APPROVED [illegible]
APPROVAL [illegible]
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SCHEMATIC
POWER SUPPLY ASSEMBLY
AGC DSKY MAIN & NAV 100 SERIES

CODE IDENT NO. —
SIZE D
NASA DRAWING NO. 1005756
SCALE NONE WT
SHEET 1 OF 5

COMPONENT LIST					
VALUE	TOL	RATING	REF DESIGNATION	PART NO	DESCRIPTION
			CR1 THRU CR81	1006751	DIODE
			K6,K12,K18	1006815-2	RELAY
			K1 THRU K5	1006772-1	"
			K7 THRU K11	1006772-2	"
			K13 THRU K17	1006772-3	"
			K19 THRU K42	1006772-4	RELAY
47K	±2%	1/4W	R1, R2	1006750T2	RESISTOR

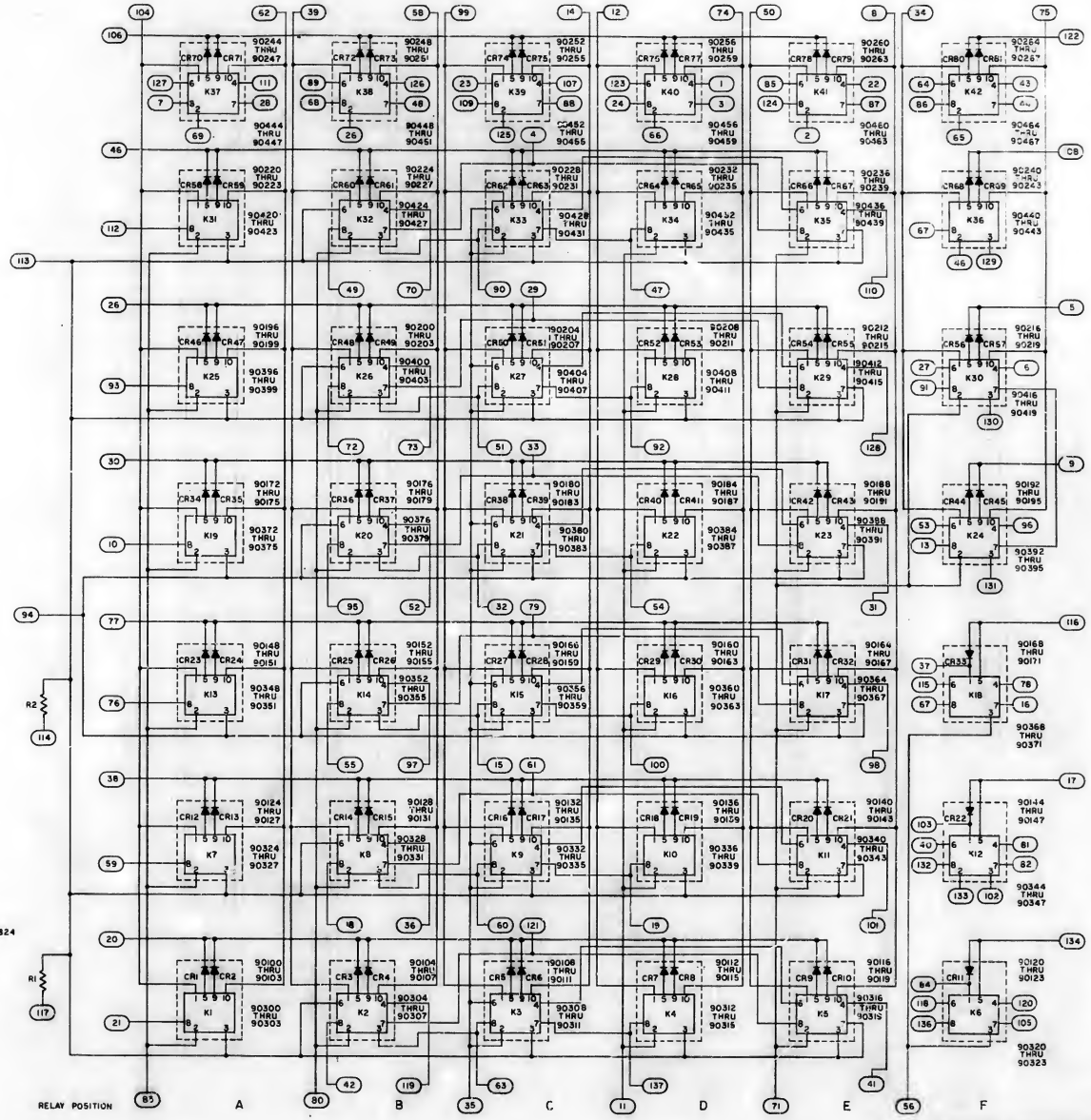


CKT FOR LATCHING RELAYS K1 THRU K5, K7 THRU K11, K13 THRU K17 & K19 THRU K42 TO SWITCH AND LATCH FROM POSITION SHOWN APPLY PLUS VOLTAGE ON PIN 10

RELAY CKT FOR K6, K12 & K18 (TO SWITCH FROM POSITION SHOWN APPLY PLUS VOLTAGE ON PIN 1)

NOTES
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN PREFIX THEM WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH

REFERENCES
1. ASSEMBLY DWG 1003824



MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

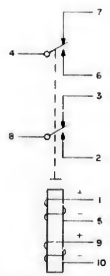
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

RELAY MODULE ASSEMBLY
AGC

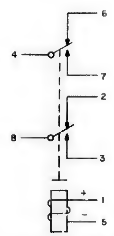
80230 J 1005

1005780

COMPONENT LIST			
	REF DESIGNATION	PART NO.	DESCRIPTION
	CR1 THRU CR81	1006751	DIODE
	K6, K12, K18	1006815-2	RELAY
	K1 THRU K5	1006772-	
	K7 THRU K11	1006772-	
	K13 THRU K17	1006772-	
	K19 THRU K42	1006772-	RELAY
±2%	R1, R2	1006750-72	RESISTOR



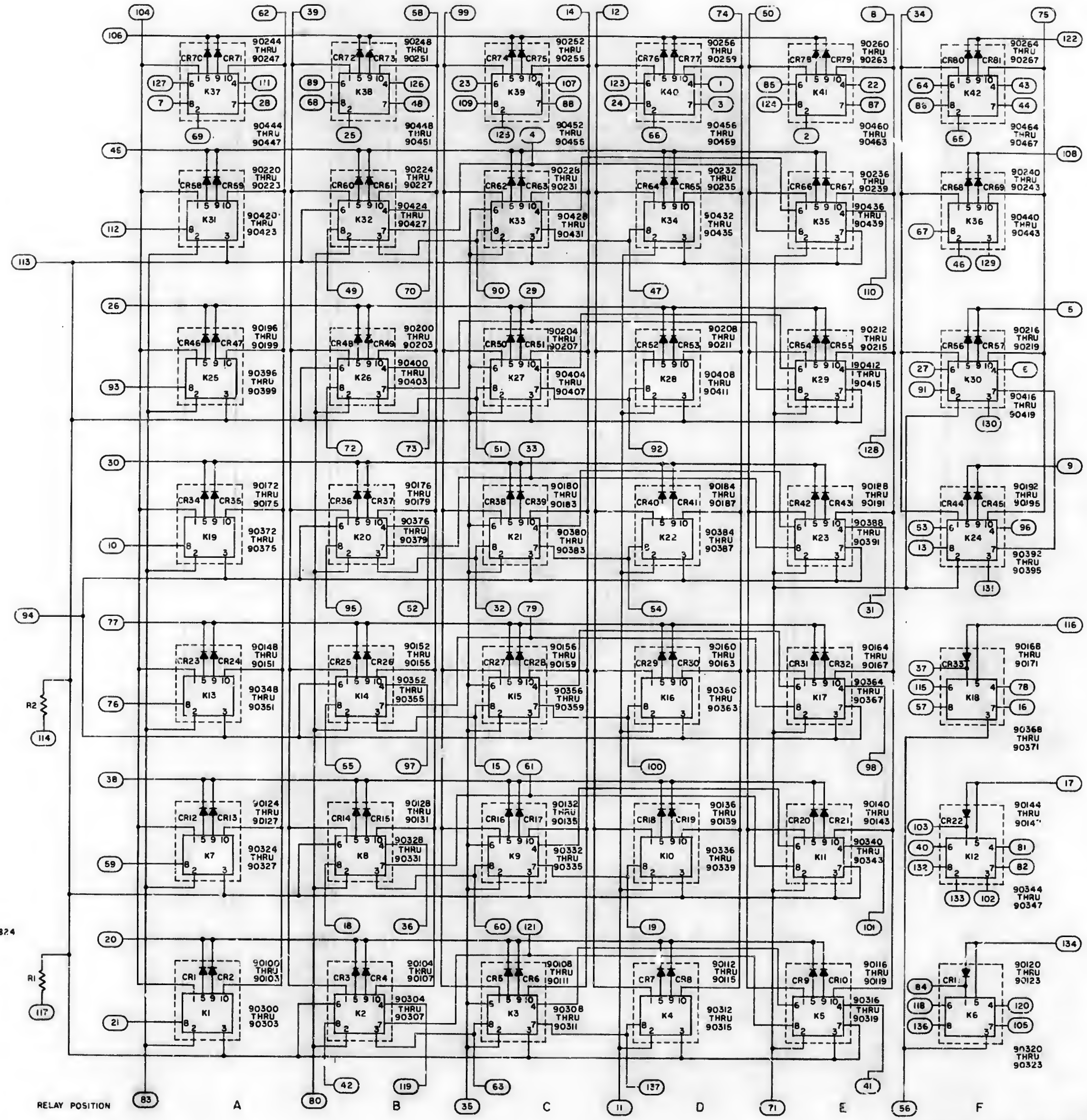
CKT FOR LATCHING RELAYS K1 THRU K5, K7 THRU K11, K13 THRU K17 & K19 THRU K42 TO SWITCH AND LATCH FROM POSITION SHOWN APPLY PLUS VOLTAGE ON PIN 10



RELAY CKT FOR K6, K12 & K18 (TO SWITCH FROM POSITION SHOWN APPLY PLUS VOLTAGE ON PIN 1)

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN PREFIX THEM WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH

REFERENCES
1. ASSEMBLY DWG 1003824



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN µf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON | APPLICATION

LIST OF MATERIALS

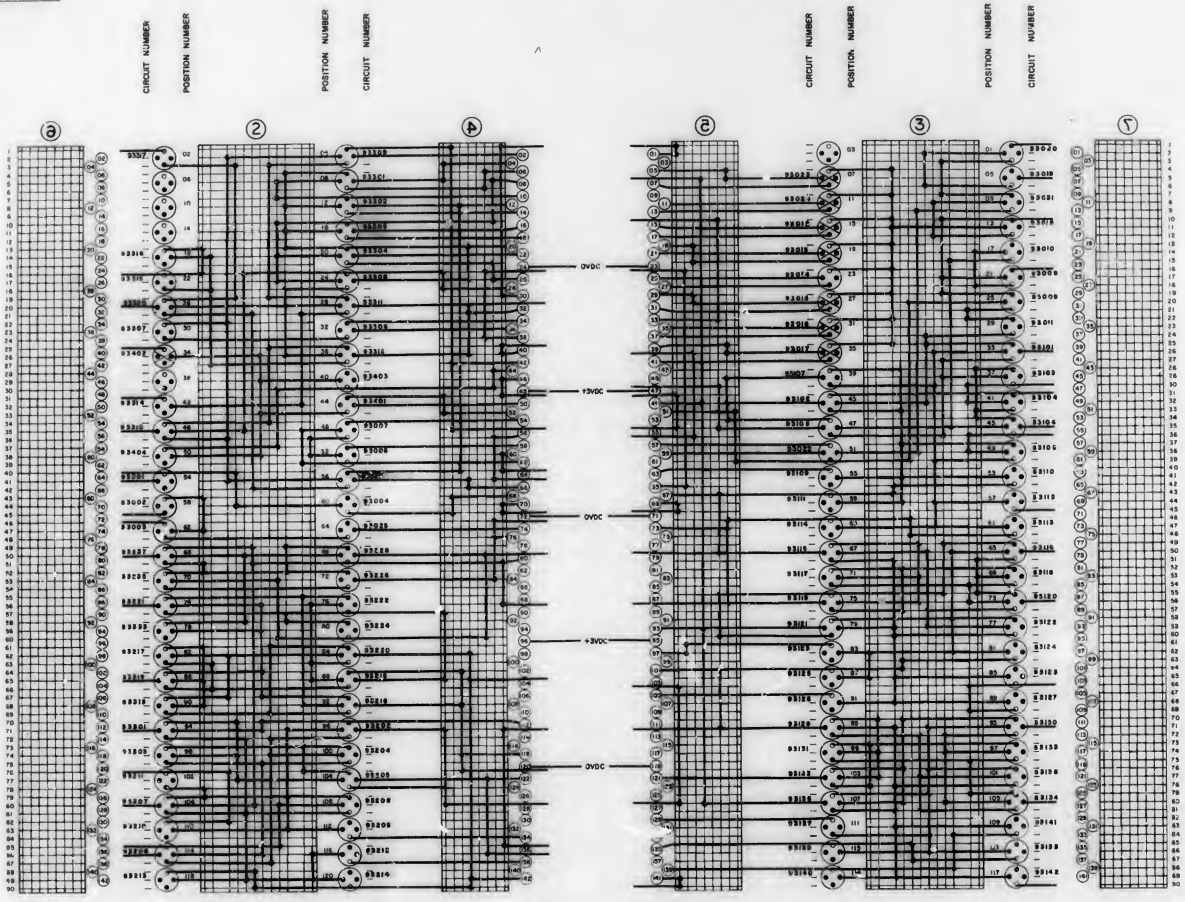
MIT INSTRUMENTATION LAB CAMBRIDGE MASS

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SCHEMATIC
RELAY MODULE ASSEMBLY D7-D14
AGC DSKY NAV & MAIN

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 1005780

REVISIONS				
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		



REF. DWG.
1. LOGIC FLOW DIAGRAM 1006551

NOTES –
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. DENOTES FAN IN CIRCUIT (+3VDC LEAD NOT CONNECTED)
3. DENOTES "NOR" CIRCUIT

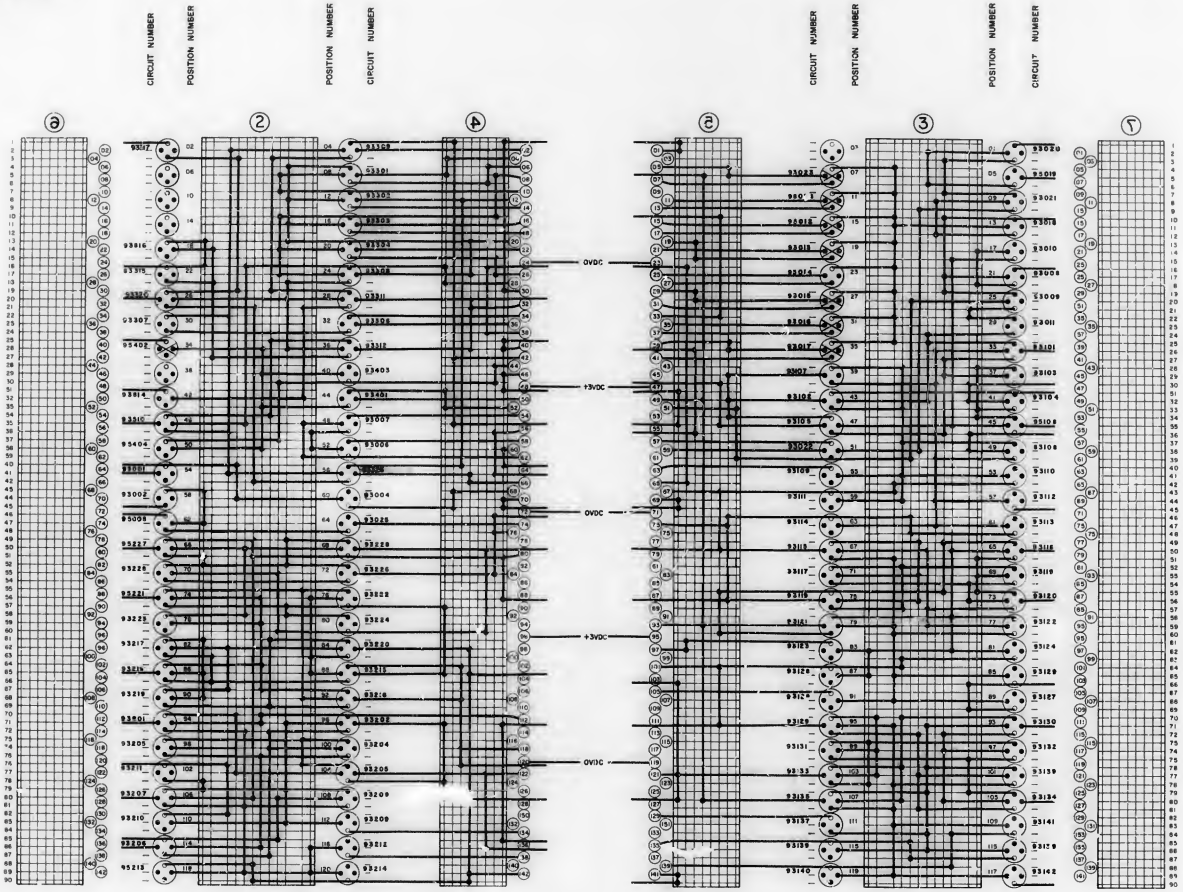
} REF. DWG. 1006013

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	MIT INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DO NOT SCALE THIS DRAWING	DRAWN [illegible] DATE 8 DEC 62	SIGNAL WIRING DIAGRAM LOGIC MODULE NO. A38	
MATERIAL NONE	CHECKED [illegible]		
HEAT TREATMENT NONE	APPROVED [illegible]		
FINISH NONE	NASA APPROVAL [illegible]	CODE IDENT NO	SIZE E / NASA DRAWING NO 1006131
NEXT ASSY USED ON APPLICATION	MIT APPROVAL [illegible]	SCALE	WT SHEET 1 OF 1

1006131



REF. DWG.
1. LOGIC FLOW DIAGRAM 1006511

NOTES–

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. DENOTES "FAN IN" CIRCUIT (+3VDC LEAD NOT CONNECTED)
3. DENOTES "NOR" CIRCUIT

} REF. DWG. 1006013

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FSCM NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL NONE
HEAT TREATMENT NONE
FINISH NONE
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.

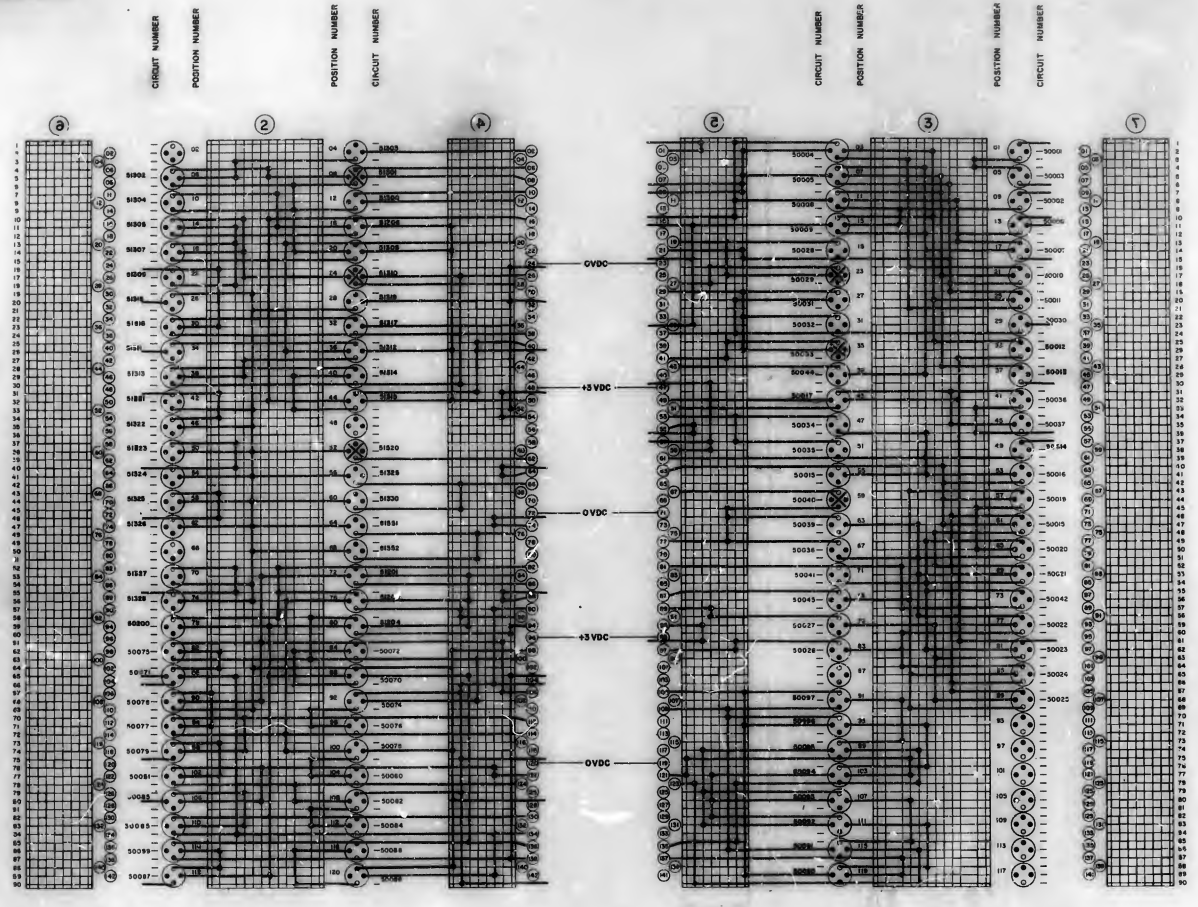
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIGNAL WIRING DIAGRAM LOGIC MODULE NO.

CODE IDENT NO. E | NASA DRAWING NO. 1006131
SCALE | WT | SHEET 1 OF 1

1006131



NOTES-

1- INTERPRET DWG IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2- DENOTES "FAN IN" CIRCUIT (+5V DC LEAD NOT CONNECTED) — REF. DWG. 1006133

3- DENOTES "NOR" CIRCUIT

REF DWG

1. LOGIC FLOW DIAGRAM 1006532

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FSC NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMAL ± ANG ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.

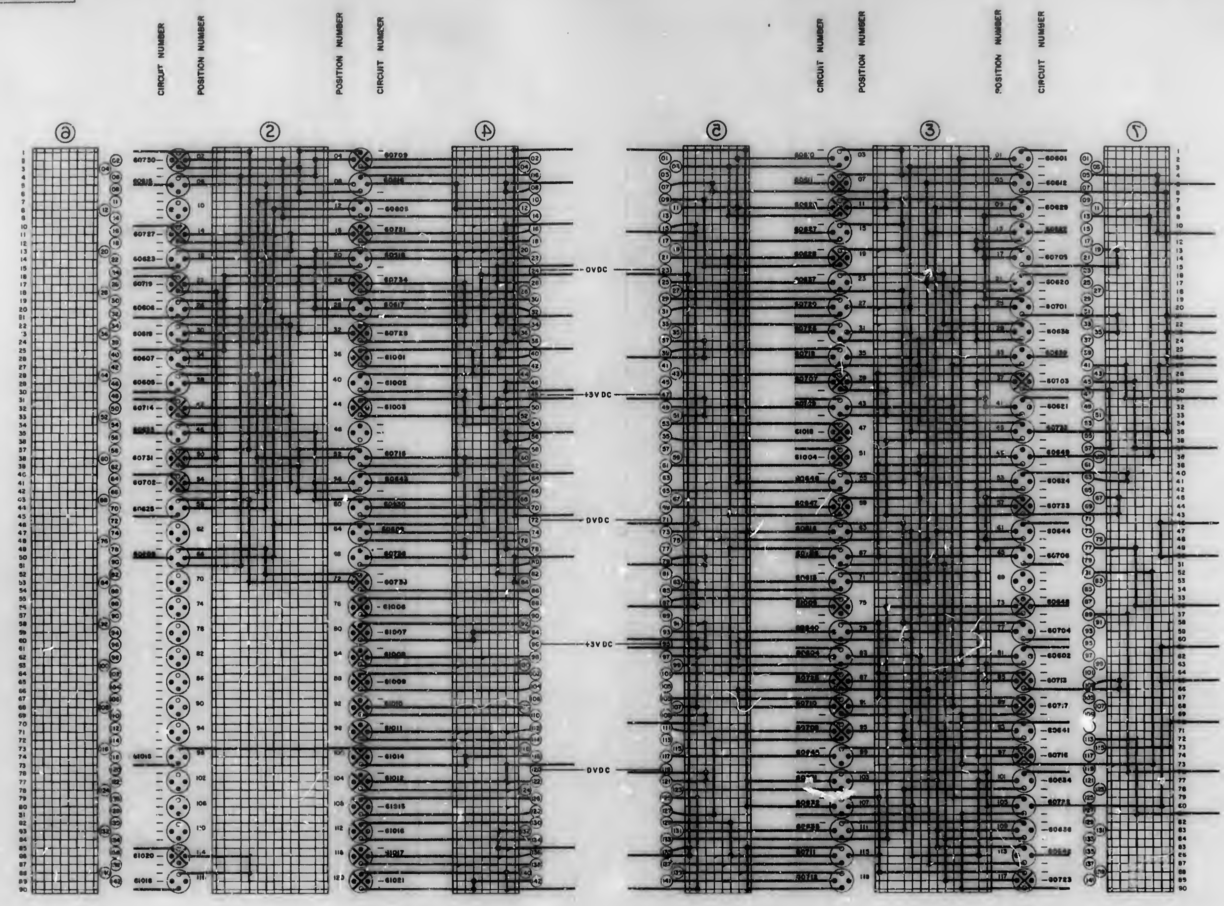
DRAWN [illegible] DATE 8-7-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible] 8-31-63
MIT APPROVAL [illegible] 8/30/63

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A-28

CODE IDENT NO 80126 | SIZE E | NASA DRAWING NO 1006132
SCALE 2/1 | WT | SHEET 1 OF 1

1006095



REF DWG
1. LOGIC FLOW DIAGRAM 1006553

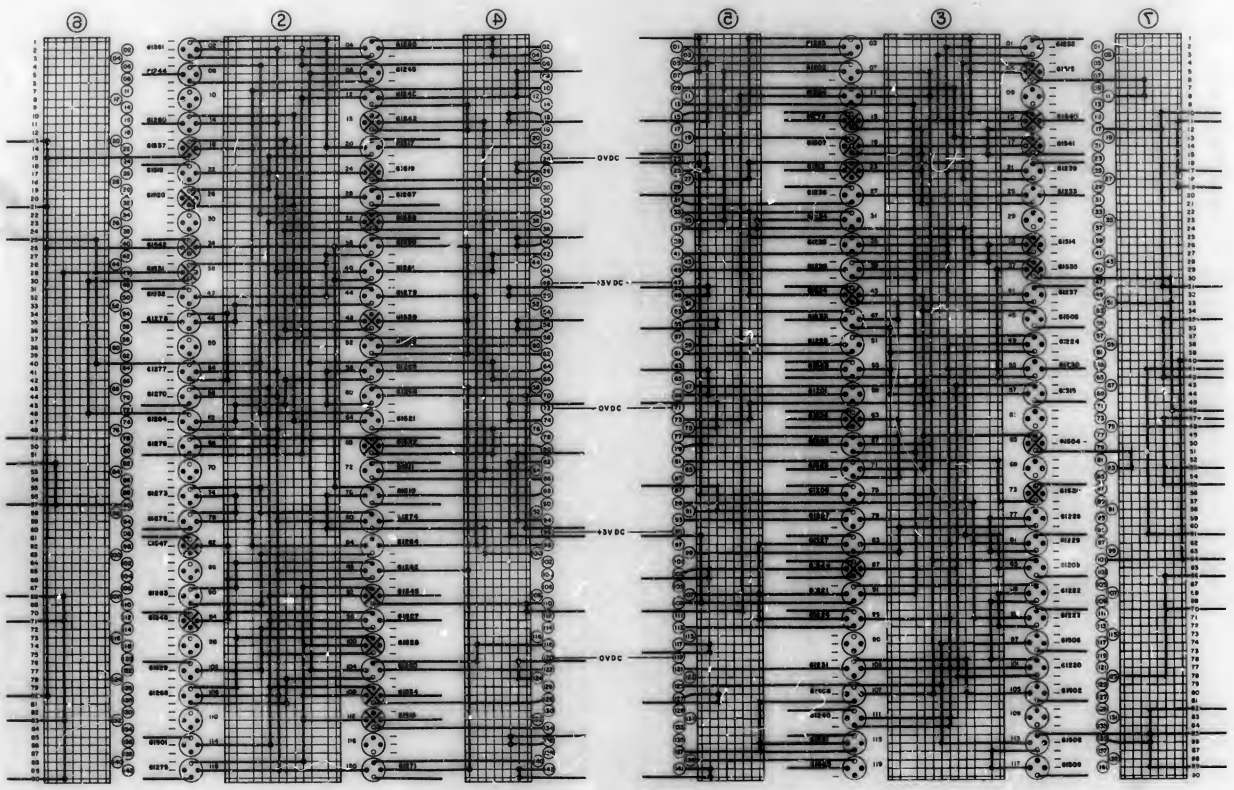
NOTES-
1- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2- DENOTES "FAN IN" CIRCUIT (+3V DC LEAD NOT CONNECTED)
3- DENOTES "NOR" CIRCUIT
REF. DWG. 1006013

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
LIST OF MATERIALS

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A22

SIZE E
NASA DRAWING NO 1006133
SCALE 2/1
SHEET 1 OF 1



REF DWG
LOGIC FLOW DIAGRAM 1006555

NOTES-

1- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2- DENOTES "PAN M" CIRCUIT (+3V DC LEAD NOT CONNECTED) } REF. DWG. 1006013

3- DENOTES "NON" CIRCUIT }

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

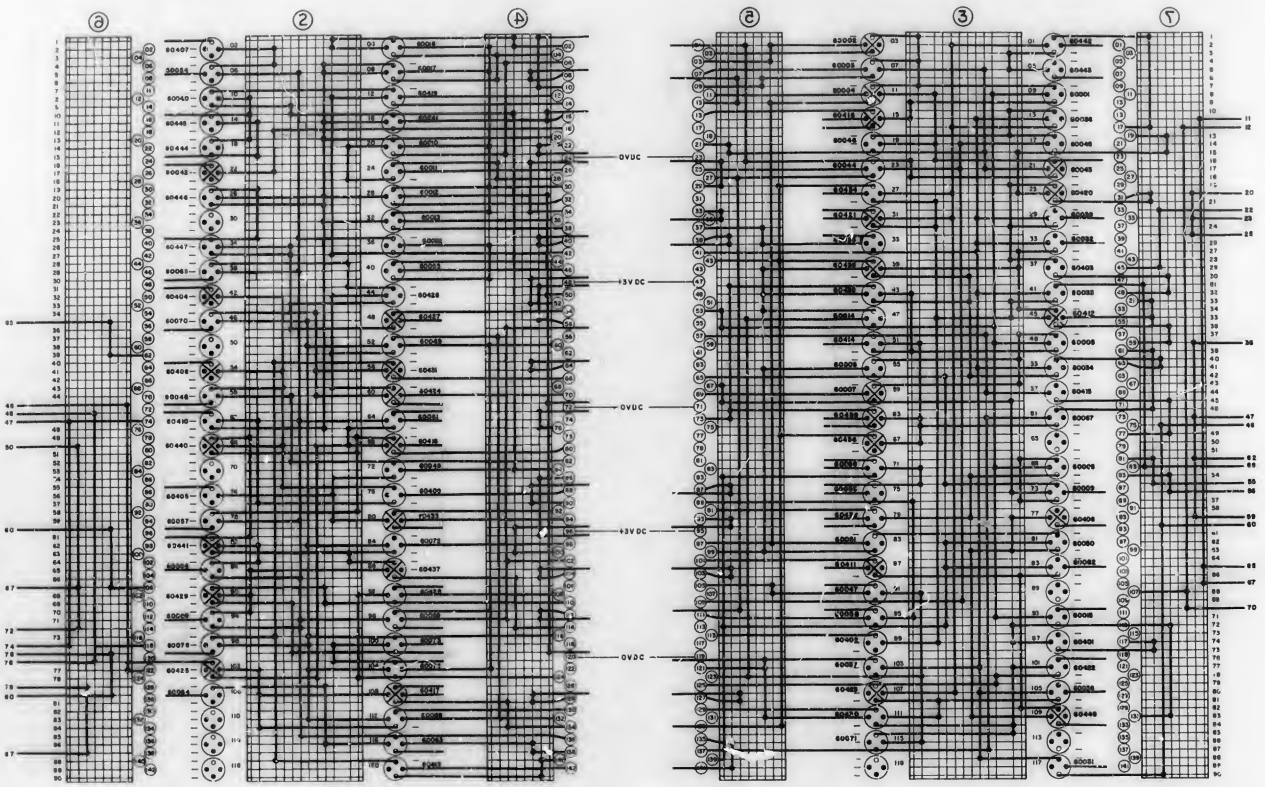
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMAL ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINISH
NEXT ASSY USED ON APPLICATION

M.I.T. INSTRUMENTATION LAB Cambridge, Mass.
DRN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
NAT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A24

CODE IDENT NO. | SIZE E | DWG DRAWING NO 1006135
SCALE 2/1 | WT | SHEET 1 OF 1



REF DWG.
LLOGIC FLOW DIAGRAM 1006556

NOTES–

1– INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

DENOTES "FAN IN" CIRCUIT (+3V DC LEAD NOT CONNECTED)

DENOTES "NOR" CIRCUIT

} REF. DWG. 1006013

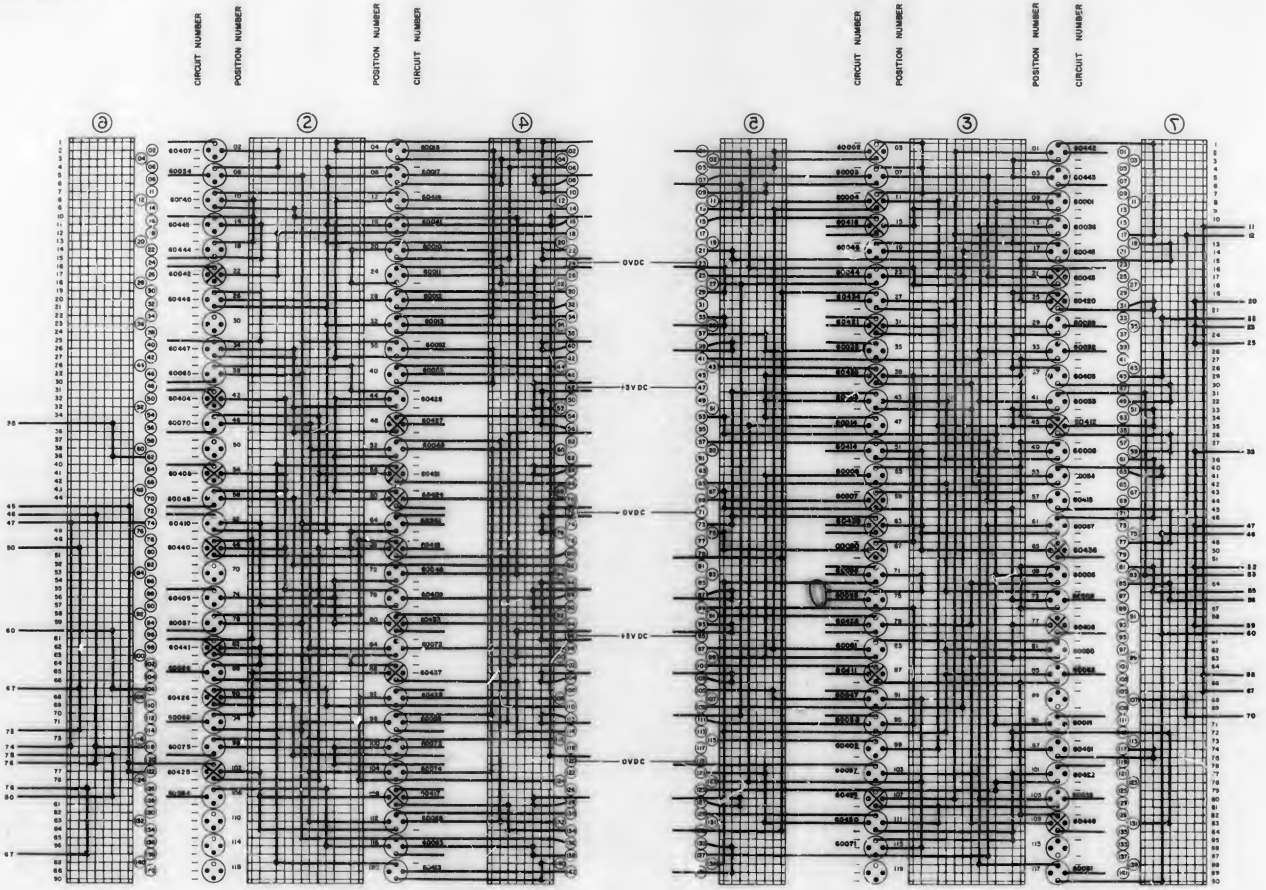
QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES		MANNED SPACECRAFT CENTER HOUSTON TEXAS	
DO NOT SCALE THIS DRAWING MATERIAL SEE NOTE 5		SIGNAL WIRING DIAGRAM LOGIC MODULE NO. A21	
HEAT TREATMENT		CODE IDENT NO	SIZE E
FINISH		SCALE 2/1	WT
NEXT ASSY USED ON APPLICATION			SHEET 1 OF 1

1006136

REVISIONS			
QTY	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]	7-10-64	[illegible]
B	REVISED PER TDRR 0635	7/10/64	[illegible]



REF. DWG.
LOGIC FLOW DIAGRAM 1006556

NOTES –

1– INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2– DENOTES "FAN IN" CIRCUIT (+3VDC LEAD NOT CONNECTED)

3– DENOTES "NOR" CIRCUIT

} REF. DWG. 1006558

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINISH

DRAWN [illegible] DATE 3/4/63
CHECKED [illegible]
APPROVED [illegible]
APPROVED [illegible]

NASA APPROVAL [illegible] 7-17-63
MIT APPROVAL [illegible]

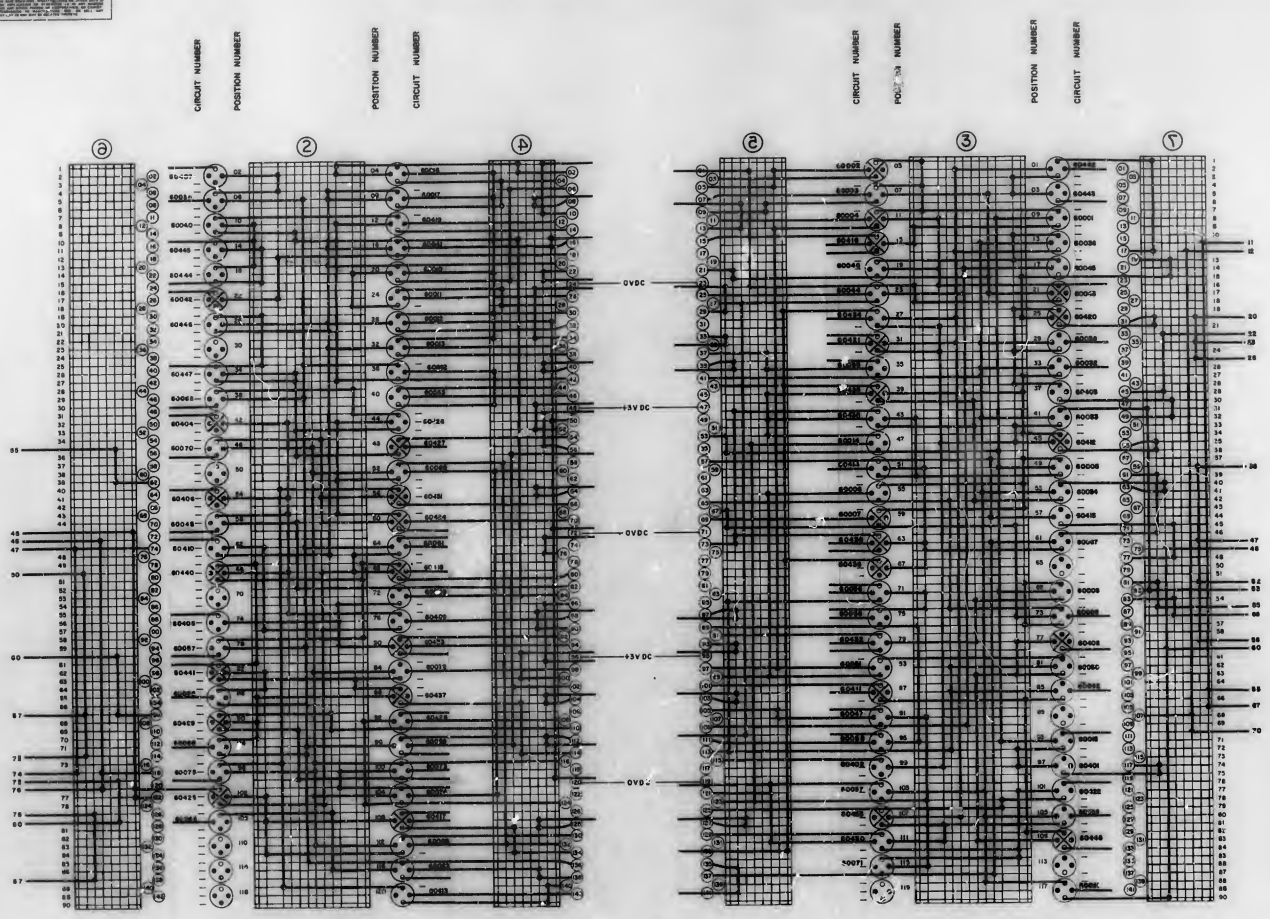
NEXT ASSY USED ON
APPLICATION

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A21

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1006136

SCALE 2/1 WT SHEET 1 OF 1

1006136 B



NOTES:-

1- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2- DENOTES "FAN IN" CIRCUIT (+5V DC LEAD NOT CONNECTED)

3- DENOTES "NOR" CIRCUIT

} REF. DWG. 1006013

REF. DWG.
LLOGIC FLOW DIAGRAM 1006556

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

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INSTRUMENTATION LAB
CAMBRIDGE MASS.

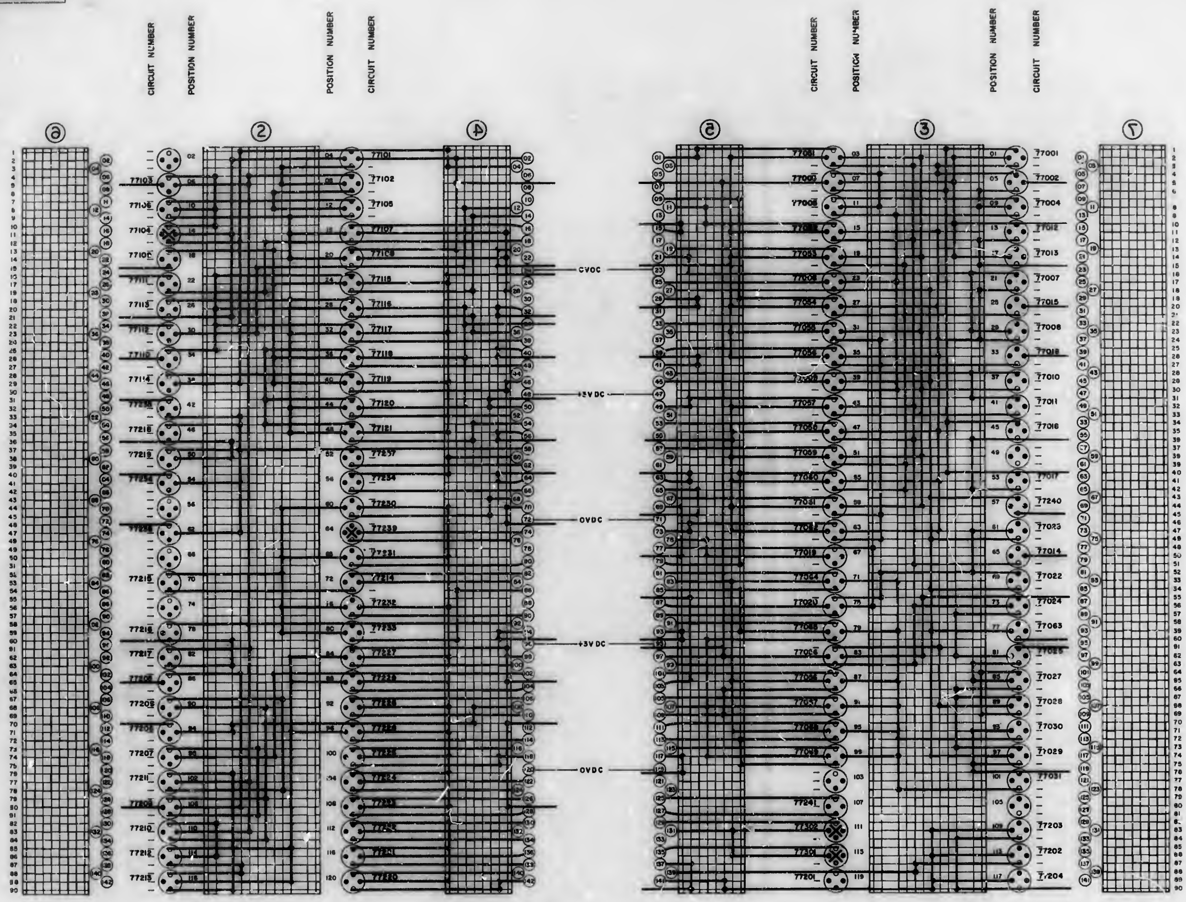
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A21

DRAWN DATE 7-17-69
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 7-17-69
NT APPROVAL

CODE IDENT NO E
SIZE
NASA DRAWING NO 1006136
SCALE 2/1 WT SHEET 1 OF 1

1006136



REF DWG.
LLOGIC FLOW DIAGRAM 1006557

NOTES-
1- INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2- DENOTES "FAN IN" CIRCUIT (+3V DC LEAD NOT CONNECTED)
3- DENOTES "NOR" CIRCUIT
REF. DWG. 1006013

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

NEXT ASSY | USED ON

APPLICATION

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CHECKED
APPROVAL
APPROVAL

NASA APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

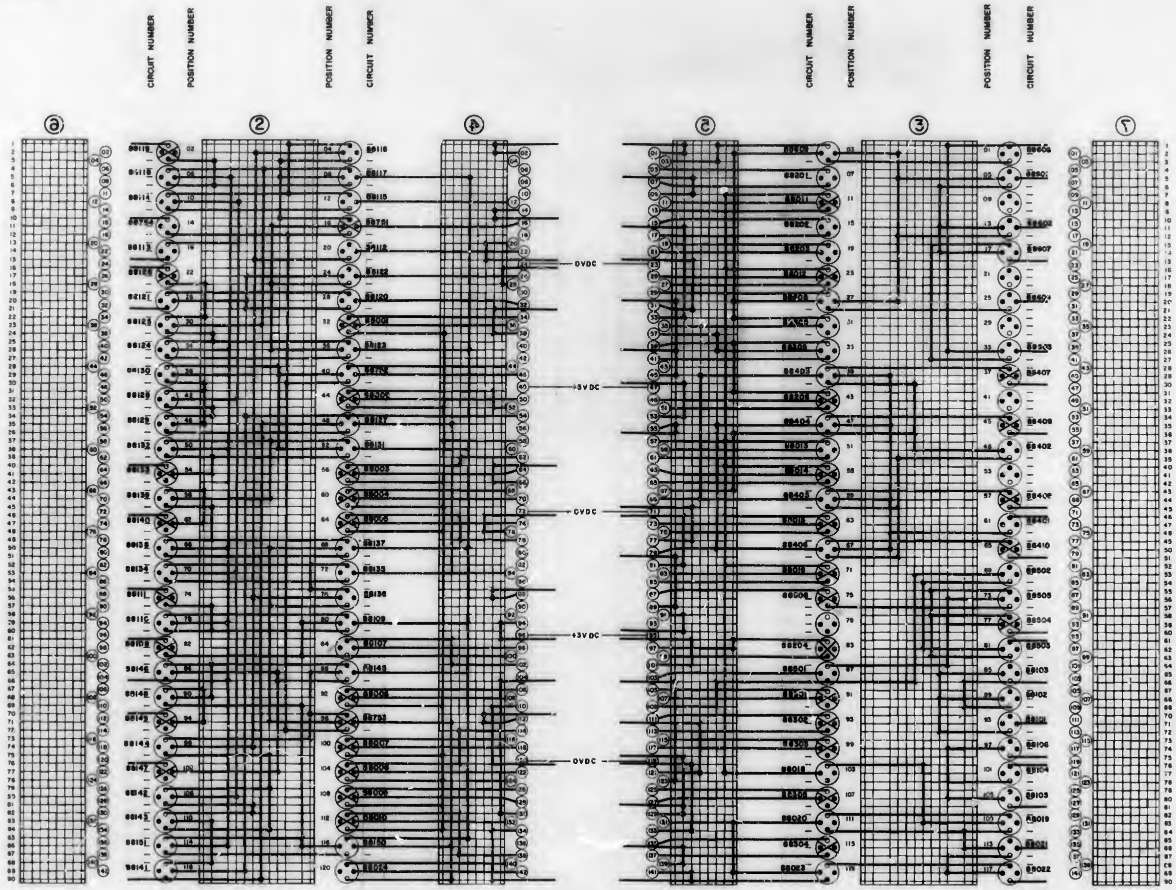
SIGNAL WIRING DIAGRAM LOGIC MODULE NO. A36

E 1006137

SCALE 2/1

SHEET 1 of 1

1006137



REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06147		

REF. DWG.
LLOGIC FLOW DIAGRAM 1006539

NOTES–

1– INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2– (symbol) DENOTES "FAN IN" CIRCUIT (+3V DC LEAD NOT CONNECTED) — REF. DWG. 1006013

3– (symbol) DENOTES "NOR" CIRCUIT

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL SEE NOTE 5

HEAT TREATMENT

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APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN W F Tray DATE 6/22/63

CHECKED

APPROVAL

APPROVAL

NASA APPROVAL

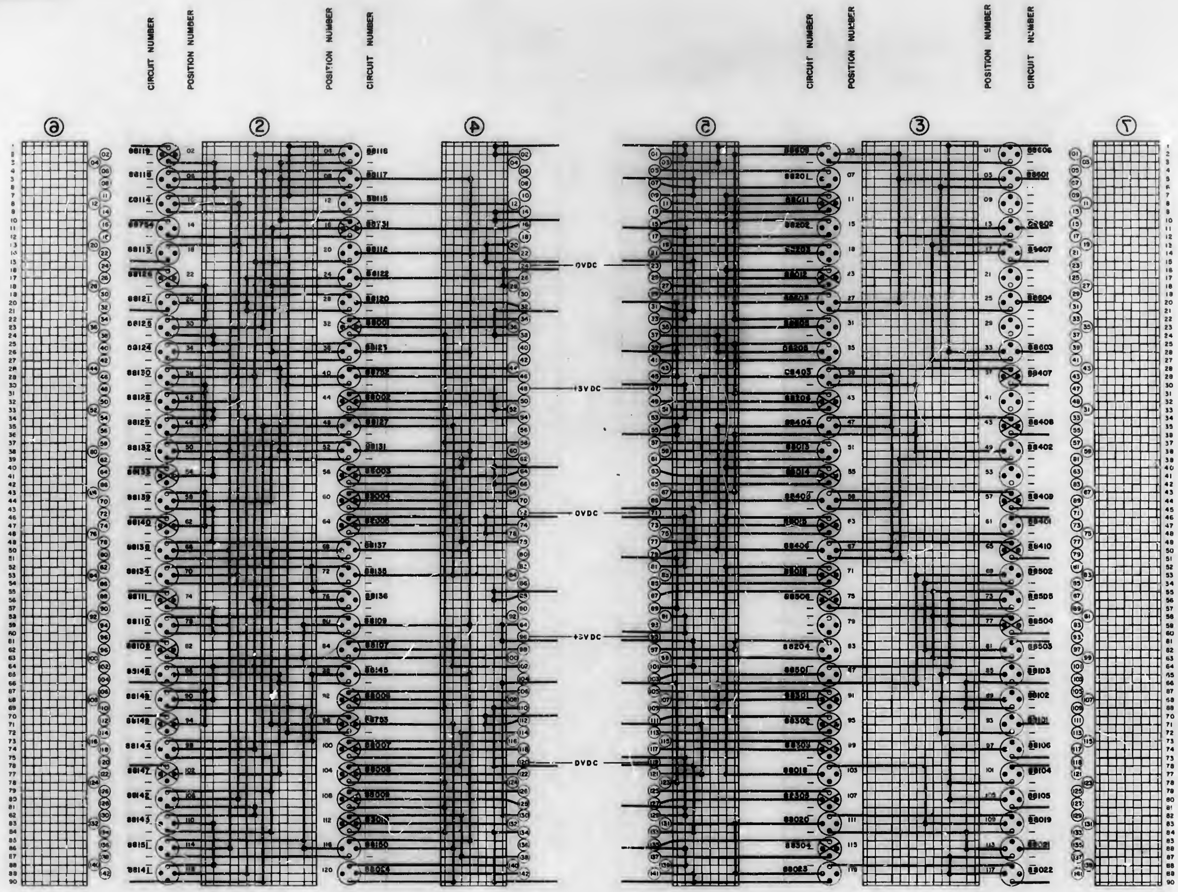
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SIGNAL WIRING DIAGRAM
LOGIC MODULE NO. A-29

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1006139

SCALE 2/1 | WT | SHEET 1 OF 1



REF. DWG.
LLOGIC FLOW DIAGRAM 1006559

NOTES–

1– INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

2– DENOTES "FAN IN" CIRCUIT (+3V DC LEAD NOT CONNECTED) } REF DWG 1006013

3– DENOTES "NOR" CIRCUIT

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
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DRAWN W. F. Troy DATE 8/12/63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

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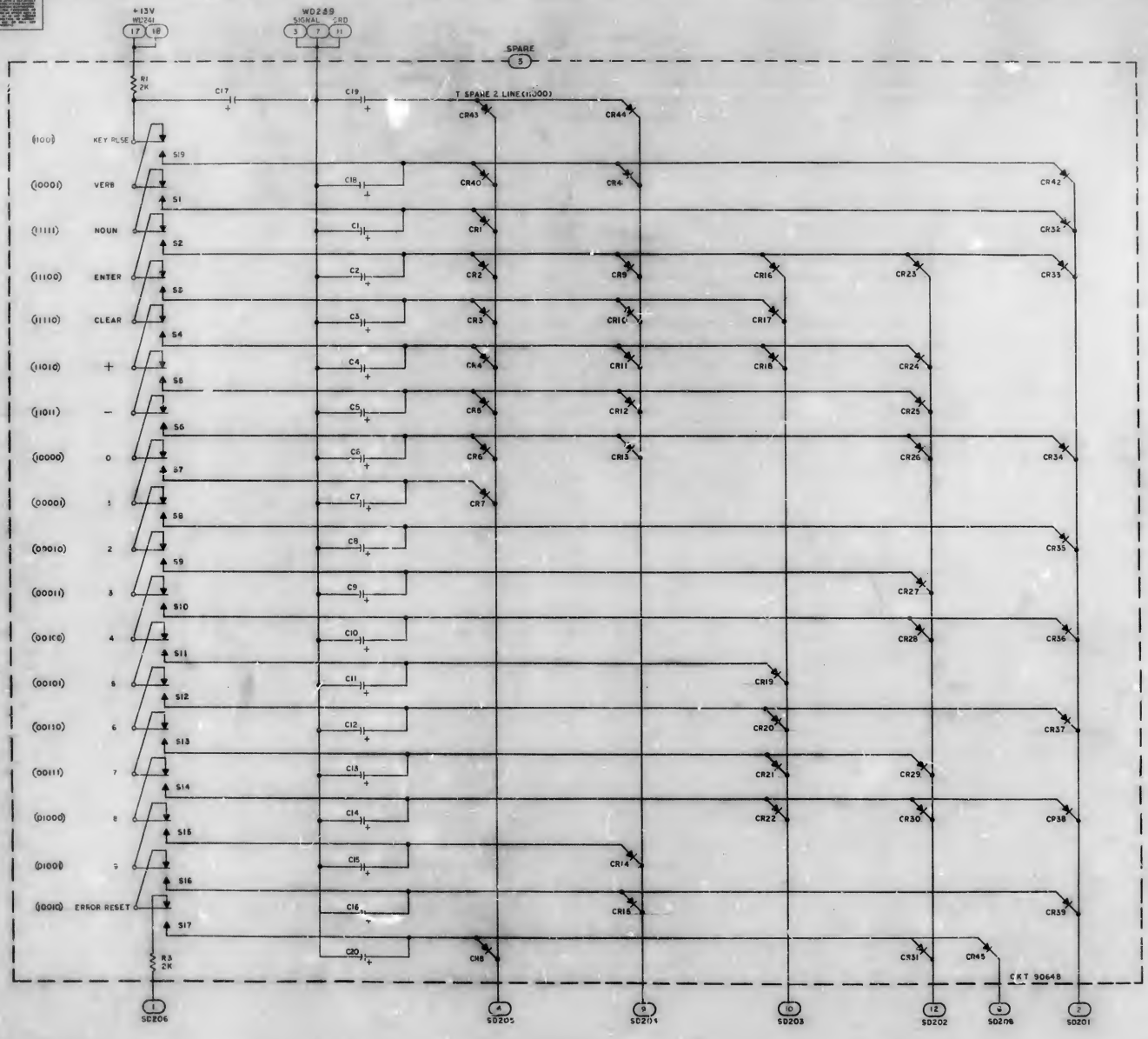
HOUSTON, TEXAS

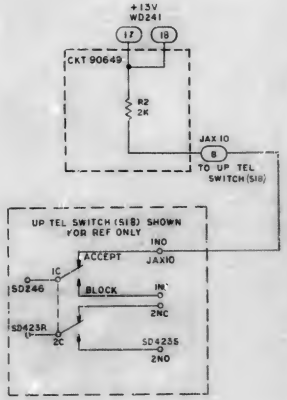
SIGNAL WIRING DIAGRAM LOGIC MODULE NO. A-29

CODE IDENT NO | SIZE E | NASA DRAWING NO 1006139
SCALE 2/1 | WT | SHEET 1 OF 1

REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDAR 01766	7-24-67	



REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S17,S19	1006821	SWITCH, PUSH			
C17	1006755-79	CAPACITOR, FIXED	4.8 UF	20%	35 V
R1-R3	1006750-38	RESISTOR, FIXED FILM	2K	2%	1/4 W
C1-C16,C18,C19,C20	1006755-57	CAPACITOR, FIXED	0.1 UF	20%	35V



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

REFERENCES
1. ASSEMBLY DRAWING 1003539

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	CAGE NO

LIST OF MATERIALS

NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH

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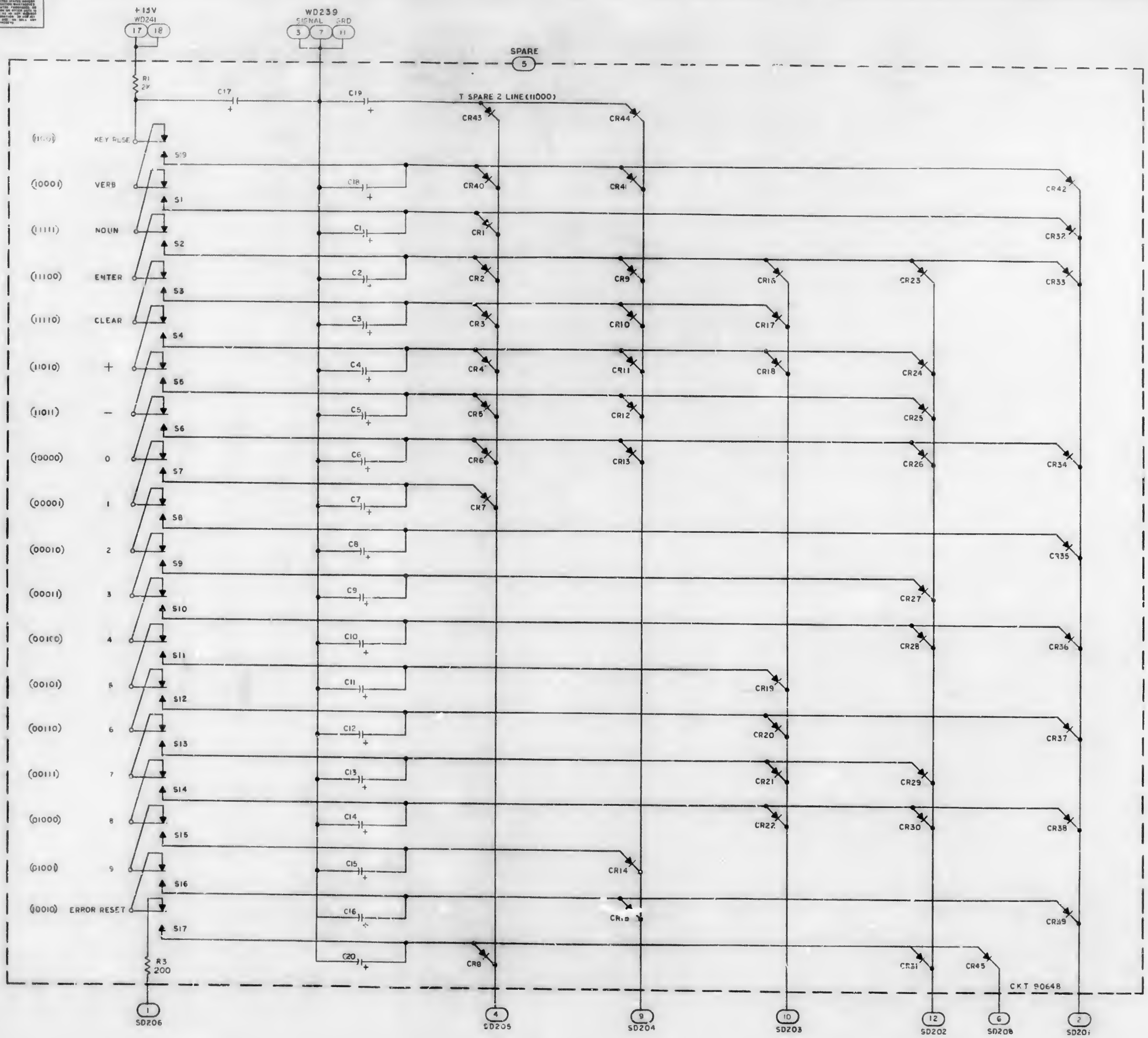
HOUSTON, TEXAS

SCHEMATIC KEYBOARD MODULE D18 AGC DSKY, MAIN

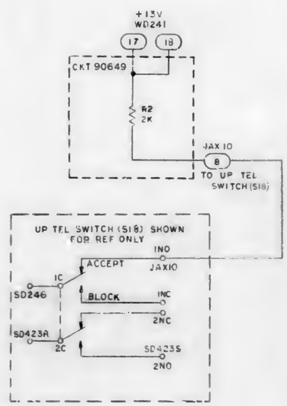
CODE IDENT NO	SIZE	DWG NO
	E	1006150

SCALE NONE WT SHEET 1 OF 1

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 01768		
B	REVISED PER TDRR 05791		



REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1 - CR45	1006751	DIODE			
S1 - S17, S19	1006821	SWITCH, PUSH			
C17	1006755-79	CAPACITOR, FIXED	6.8 UF	10%	35 V
R1 - R2	1006750-39	RESISTOR, FIXED FILM	2K	2%	1/4 W
C1-C16, C18, C19	1006755-57	CAPACITOR, FIXED	0.1 UF	10%	35 V
R3	1006750-15	RESISTOR, FIXED FILM	200	2%	1/4 W



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

REFERENCES
1. ASSEMBLY DRAWING 1003539

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

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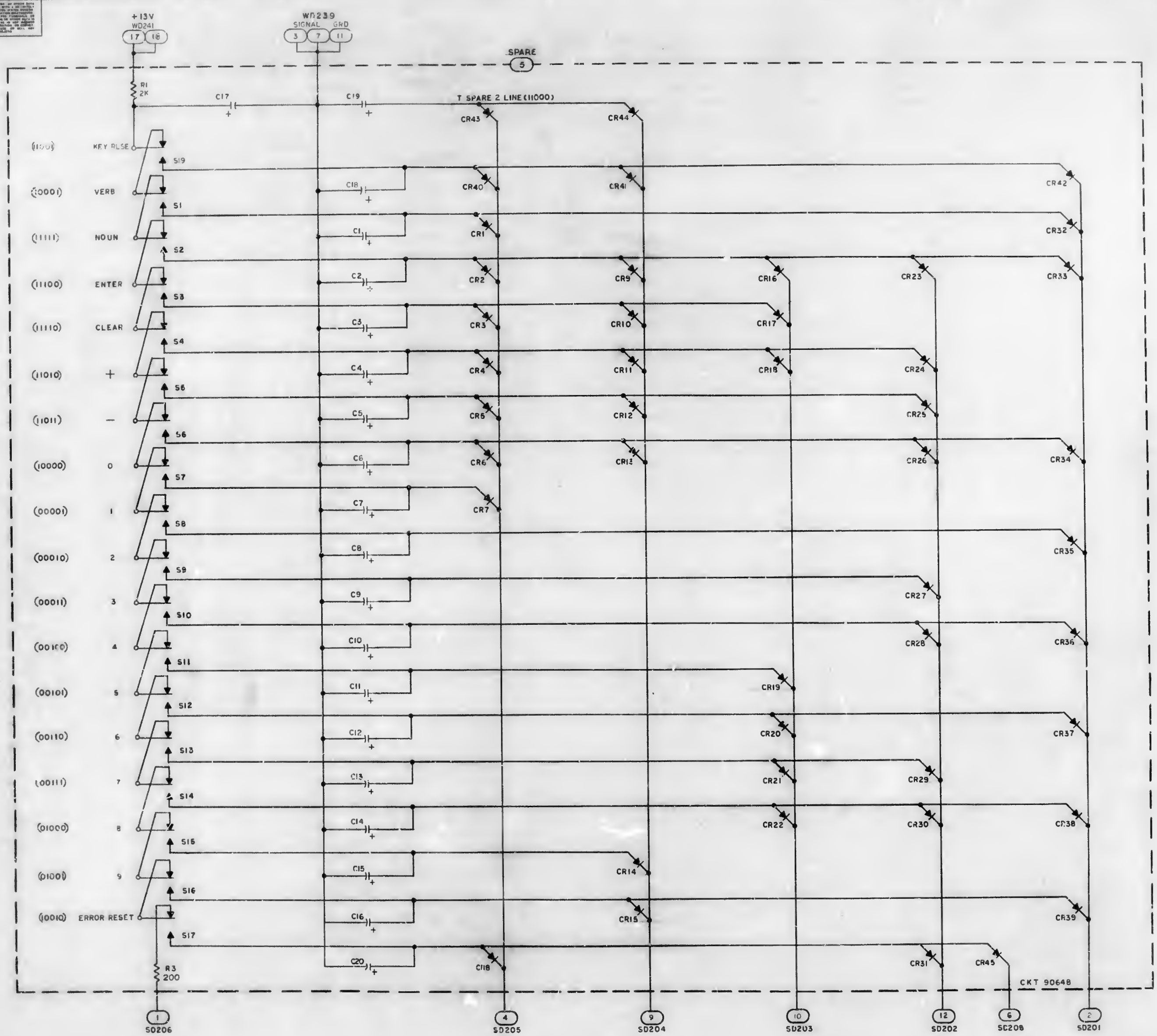
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

SCHEMATIC KEYBOARD MODULE D18
AGC DSKY, MAIN

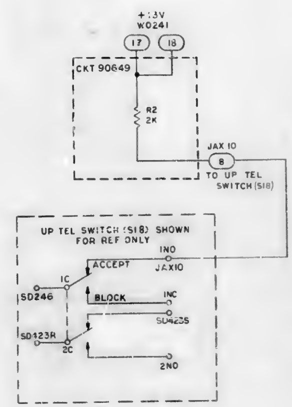
SIZE E — NASA DRAWING NO 1006150 — SCALE NONE — SHEET 1 OF 1

1006150

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]		
B	REVISED PER TDRR 05791		
C	REVISED PER TDRR 06050		



REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S17,S19	1006821	SWITCH, PUSH			
C17	1006755-79	CAPACITOR, FIXED	6.8 uf	10%	35 V
R1-R2	1006750-39	RESISTOR, FIXED FILM	2K	2%	1/4 W
C1-C16,C18,C19	1006755-57	CAPACITOR, FIXED	0.1 uf	10%	35 V
R3	1006750-15	RESISTOR, FIXED FILM	200	2%	1/4 W



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

REFERENCES
1. ASSEMBLY DRAWING 1003539

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, Cambridge Mass.
DRAWN / CHECKED / APPROVAL / APPROVAL
NASA APPROVAL / MIT APPROVAL / MIT APPROVAL

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

SCHEMATIC KEYBOARD MODULE D18
AGC DSKY, MAIN

CODE IDENT NO. —— SIZE E NASA DRAWING NO 1006150
SCALE NONE WT SHEET 1 OF 1

1006150

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04768		
B	REVISED PER TDRR 05791		
C	REVISED PER TDRR 06050		
D	CHANGED PER TDRR 57870 DRW CHK		

REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1 - CR45	1006751	DIODE			
S1 - S17, S19	SEE NOTE 2	SWITCH, PUSH			
C17	1006755-79	CAPACITOR, FIXED	6.8 UF	10%	35 V
R1 - R2	1006750-39	RESISTOR, FIXED FILM	2K	2%	1/4 W
C1-C16, C18, C19	1006755-57	CAPACITOR, FIXED	0.1 UF	10%	35V
R3, R11	1006750-32	RESISTOR, FIXED FILM	1K	2%	1/4 W
R4	1006750-56	RESISTOR FIXED FILM	10K	2%	1/4 W
R5 THRU R10	1006750-1	RESISTOR FIXED FILM	5.1 Ω	2%	1/4 W
Q1	1006752	TRANSISTOR, SILICON, TYPE NPN			
L1	1010406-7	COIL, RF CHOKE	8.2 μH	10%	
C21	1006777-24	CAPACITOR, CERAMIC	.001 μF	10%	100VDC

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. SWITCH 1006821 USED IN ASSEMBLY 1003539
SWITCH 1006738 USED IN ASSEMBLY 1003549

REFERENCES
1. ASSEMBLY DRAWING 1003539
ASSEMBLY DRAWING 1003549

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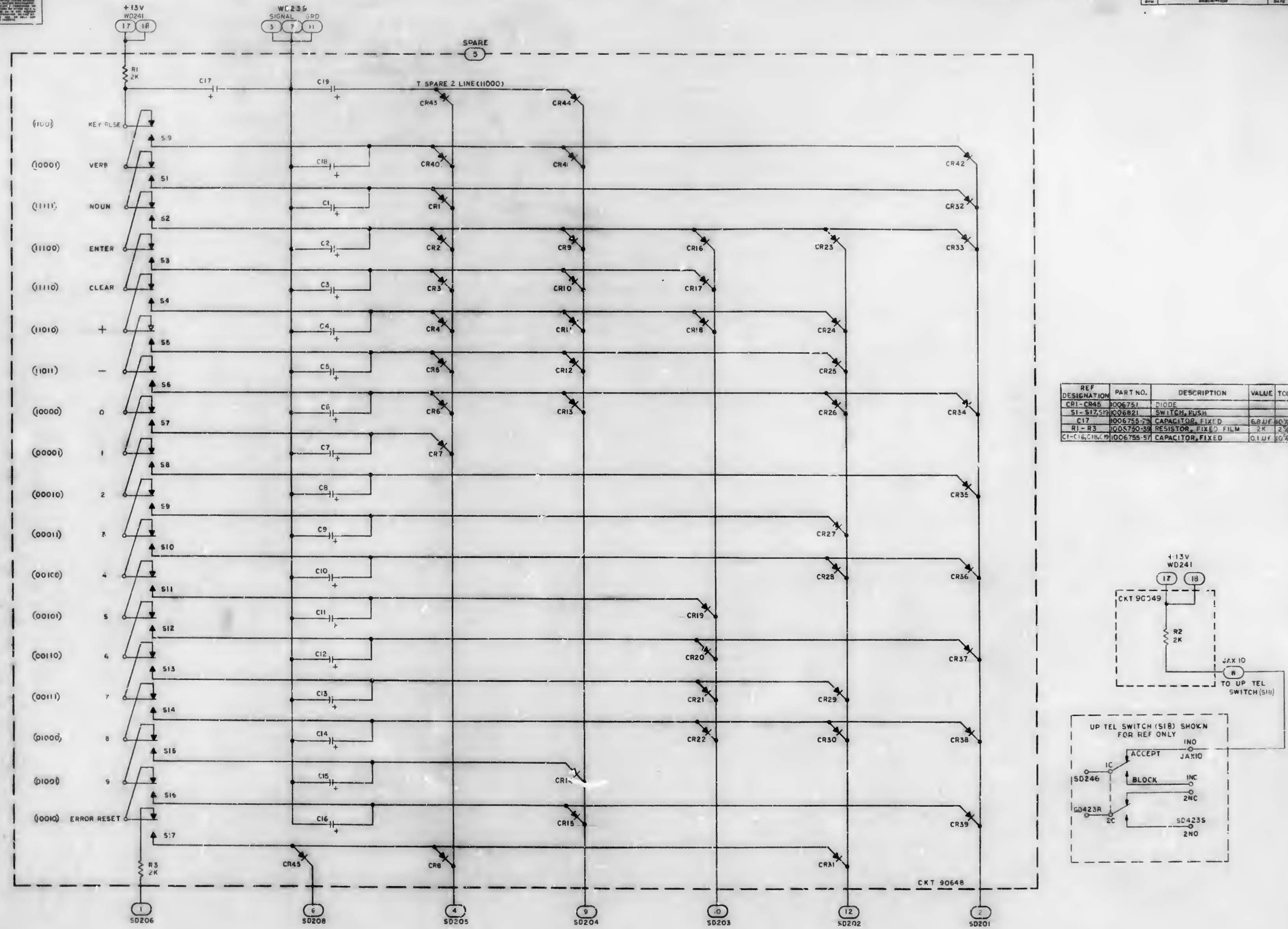
SCHEMATIC
KEYBOARD MODULE D18
AGC DSKY, MAIN

SIZE E

NASA DRAWING NO 1006150

SCALE NONE



REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S17,S19	1006821	SWITCH, PUSH			
C17	1006755-79	CAPACITOR, FIXED	6.8 UF	10%	35 V
R1-R3	1005750-39	RESISTOR, FIXED FILM	2K	2%	1/4 W
C1-C16,C18,C19	1006755-57	CAPACITOR, FIXED	0.1 UF	10%	35V

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

REFERENCES
1. ASSEMBLY DRAWING 1003539

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
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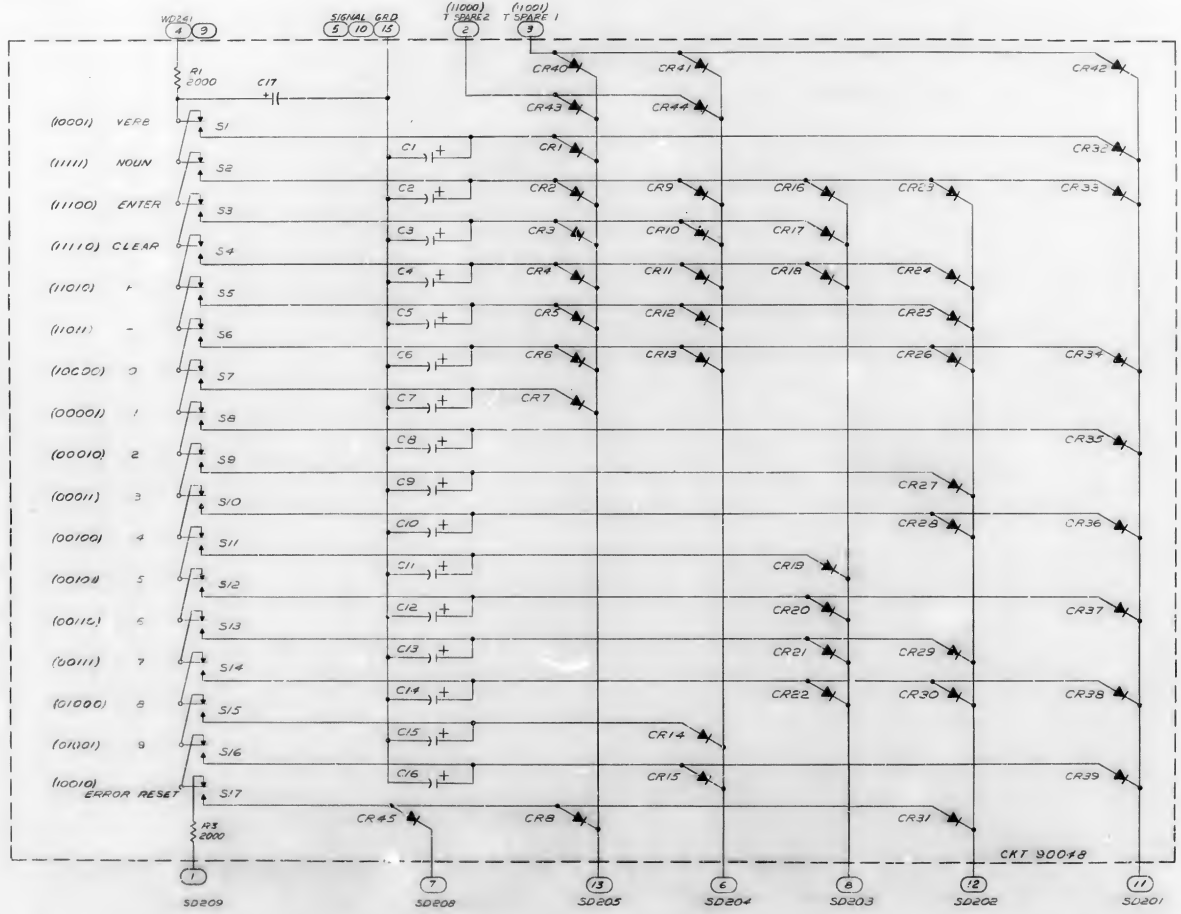
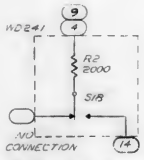
SCHEMATIC KEYBOARD MODULE D18 AGC DSKY, MAIN

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1006150
SCALE NONE | SHEET 1 OF 1



REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1 - S18	1006821	SWITCH			
C17	1006755-79	CAPACITOR	6.8 MF	10%	35 V
R1 - R3	1006750-39	RESISTOR	2K	2%, 1/4 W	
C1 - C16	1006755-57	CAPACITOR	0.1 UF	10%	35 V



REFERENCES
1. ASSEMBLY DRAWING 1003097 NAV DSKY

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	CHANGED PER TDRR 03457	5-6-69	

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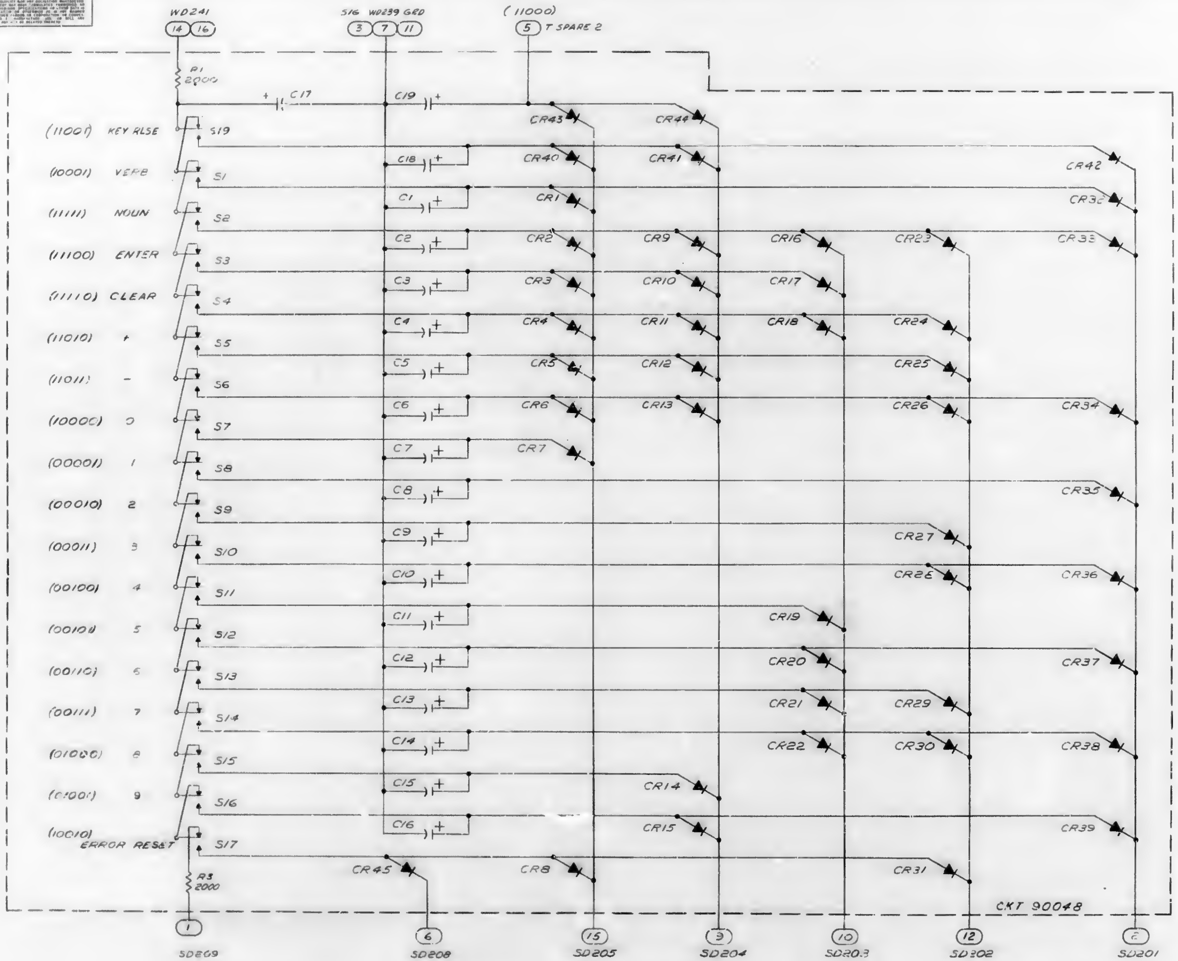
SCHEMATIC
KEYBOARD MODULE D:7
(AGC KEYBOARD)

CODE IDENT NO. | SIZE F | NASA DRAWING NO. 1006160
SCALE NONE | WT | SHEET 1 OF 1

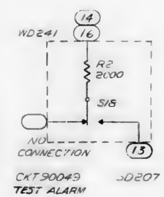
INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

1006160

SYM	REVISIONS DESCRIPTION	DATE	APPROVED
A	CHANGED PER TDRR 03454		
B	REVISED PER TDRR 04332		



REF. DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S19	1006821	SWITCH			
C17	1006755-79	CAPACITOR	6.8uf	10%	35 V
R1-R3	1006750-39	RESISTOR	2K	2%	1/4 W
C1-C16, C18, C19	1006755-57	CAPACITOR	0.1UF	10%	35 V



REFERENCES
1. ASSEMBLY DRAWINGS 1003097 NAV DSKY

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SCHEMATIC
KEYBOARD MODULE D17
AGC DSKY, NAV

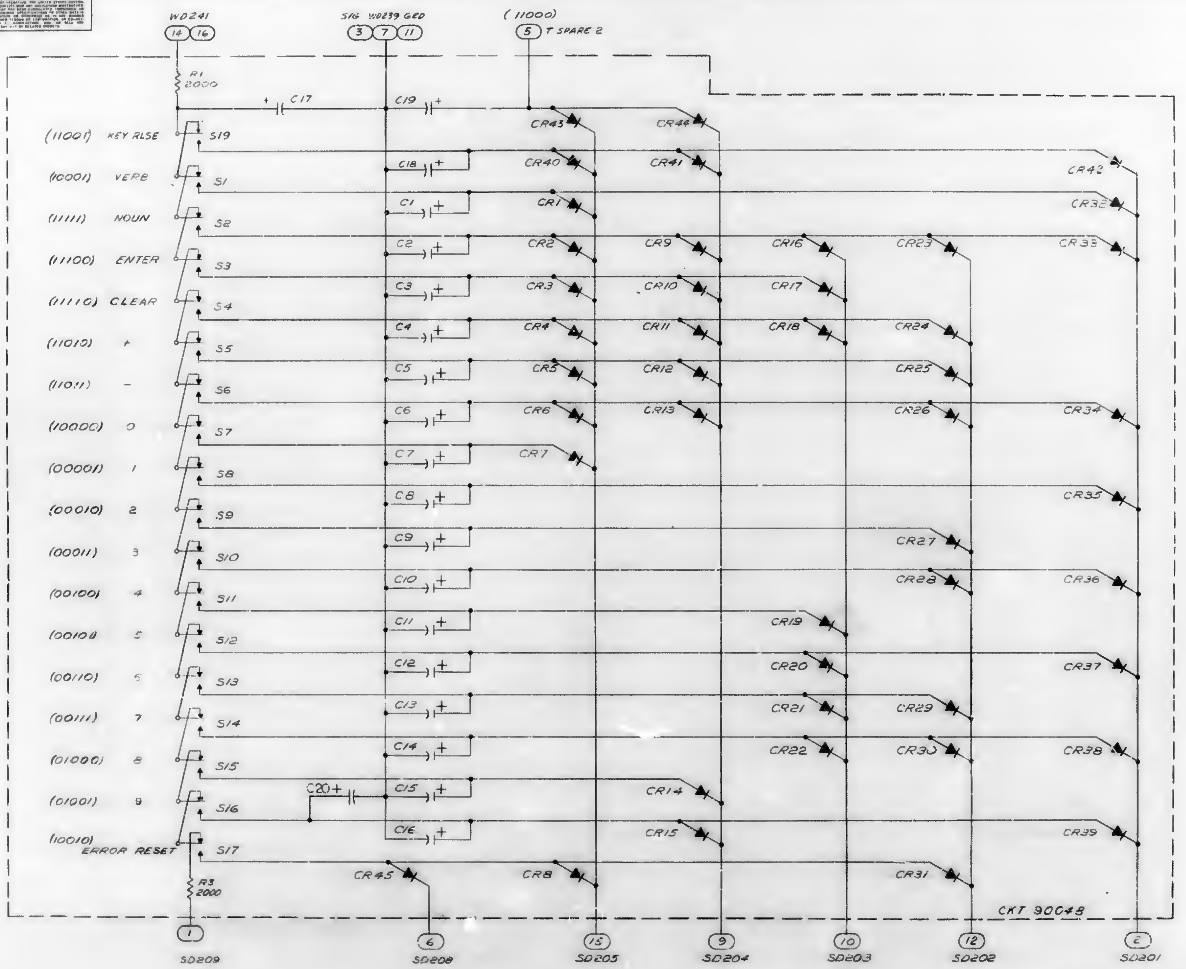
SIZE F — NASA DRAWING NO 1006160

SCALE NONE — SHEET 1 OF 1

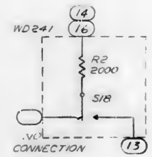
INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

SYM	DESCRIPTION	DATE	APPROVED
A	CHANGED PER TDRR 03456		
B	REVISED PER TDRR 04332		
C	REVISED PER TDRR 04509		

REVISIONS 02555



REF. DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S19	1006821	SWITCH			
C17	1006755-79	CAPACITOR	6.8 MF	10%	35 V
R1-R3	1006750-39	RESISTOR	2K	2%	1/4 W
C1-C16, C18-C20	1006755-57	CAPACITOR	0.1UF	10%	35 V



CKT 90049 SD207
TEST ALARM

REFERENCES
1. ASSEMBLY DRAWING 1003097 NAV DSKY

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

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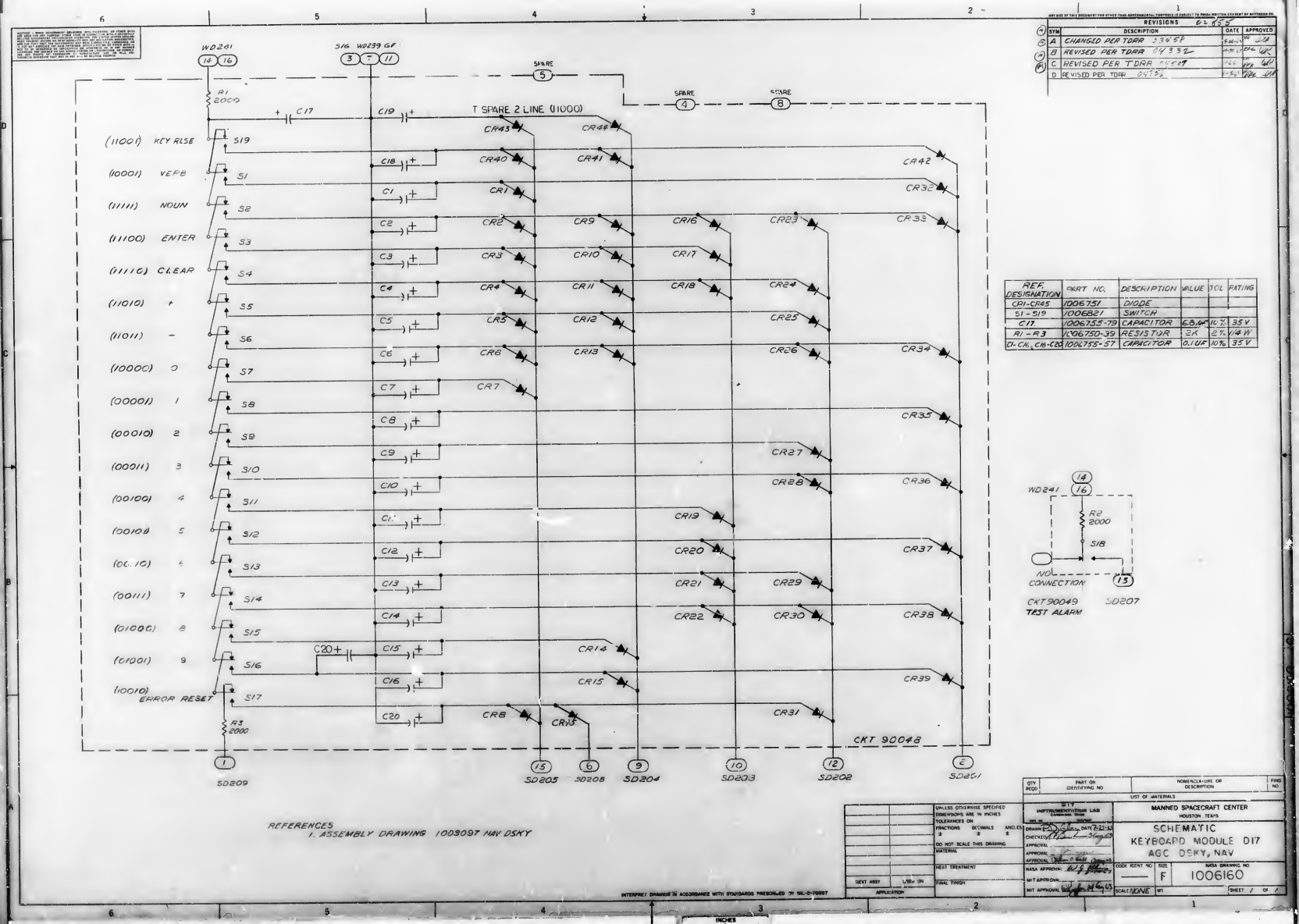
SCHEMATIC KEYBOARD MODULE D17 AGC DSKY, NAV

CODE IDENT NO — SIZE F NASA DRAWING NO 1006160
SCALE NONE WT SHEET 1 OF 1



REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	CHANGED PER TDRR 3365		
B	REVISED PER TDRR 04332		
C	REVISED PER TDRR 04509		
D	REVISED PER TDRR 04732		

REF DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S19	1006821	SWITCH			
C17	1006755-79	CAPACITOR	6.8 MF	10%	35 V
R1-R3	1006750-39	RESISTOR	2K	2%	1/4 W
C1-C16, C18-C20	1006755-57	CAPACITOR	0.1 UF	10%	35 V

REFERENCES
1. ASSEMBLY DRAWING 1003097 NAV DSKY

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

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SCHEMATIC
KEYBOARD MODULE D17
AGC DSKY, NAV

CODE IDENT NO: —— SIZE: F NASA DRAWING NO: 1006160
SCALE: NONE WT: SHEET 1 OF 1

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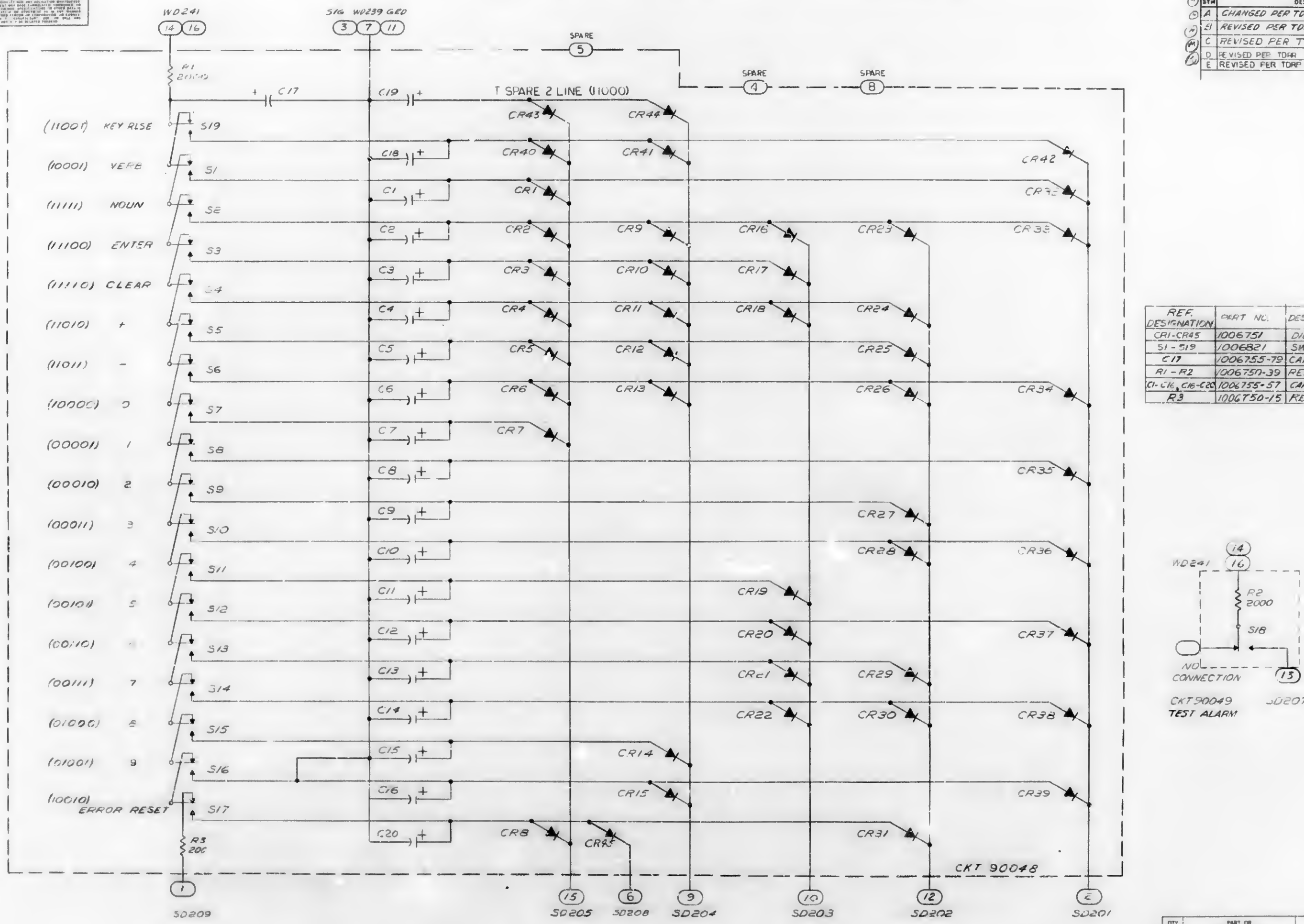
INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

INCHES

SYM	DESCRIPTION	DATE	APPROVED
A	CHANGED PER TDRR 034	5-26-63	[illegible]
B	REVISED PER TDRR 04332	[illegible]	[illegible]
C	REVISED PER TDRR 0509	[illegible]	[illegible]
D	REVISED PER TDRR 0475	[illegible]	[illegible]
E	REVISED PER TDRP 05791	1/21/64	[illegible]



REF. DESIGNATION	PART NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1 - S19	1006821	SWITCH			
C17	1006755-79	CAPACITOR	6.8 μF	10%	35 V
R1 - R2	1006750-39	RESISTOR	2K	2%	1/4 W
C1-C16, C18-C20	1006755-57	CAPACITOR	0.1 UF	10%	35 V
R3	1006750-15	RESISTOR	200	2%	1/4 W

REFERENCES
1. ASSEMBLY DRAWING 1003097 NAV DSKY

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±

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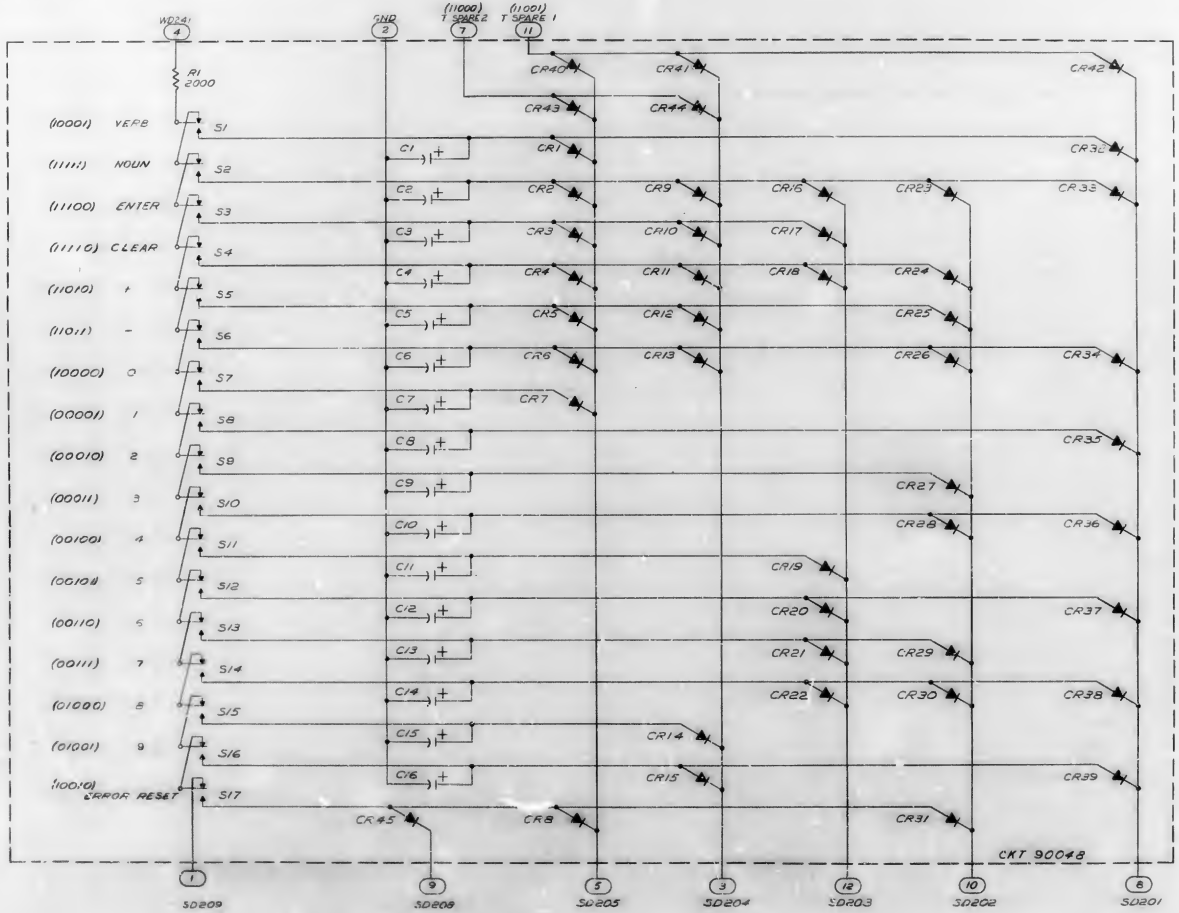
SCHEMATIC
KEYBOARD MODULE D17
AGC DSKY, NAV

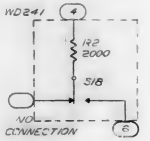
CODE IDENT NO — | SIZE F | NASA DRAWING NO 1006160

SCALE NONE | WT | SHEET 1 OF 1

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327



REF. DESIGNATION	CKT NO.	DESCRIPTION	VALUE	TOL	RATING
CR1-CR45	1006751	DIODE			
S1-S16	1006821	SWITCH			
C1-C16	1006755-79	CAPACITOR	6.8 μf		
R1-R2	1006750-39	RESISTOR	2K	±1%	1/4 W



CKT 90049 SD207
LIGHT TEST

REFERENCES
1. ASSEMBLY DRAWING 1003097

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

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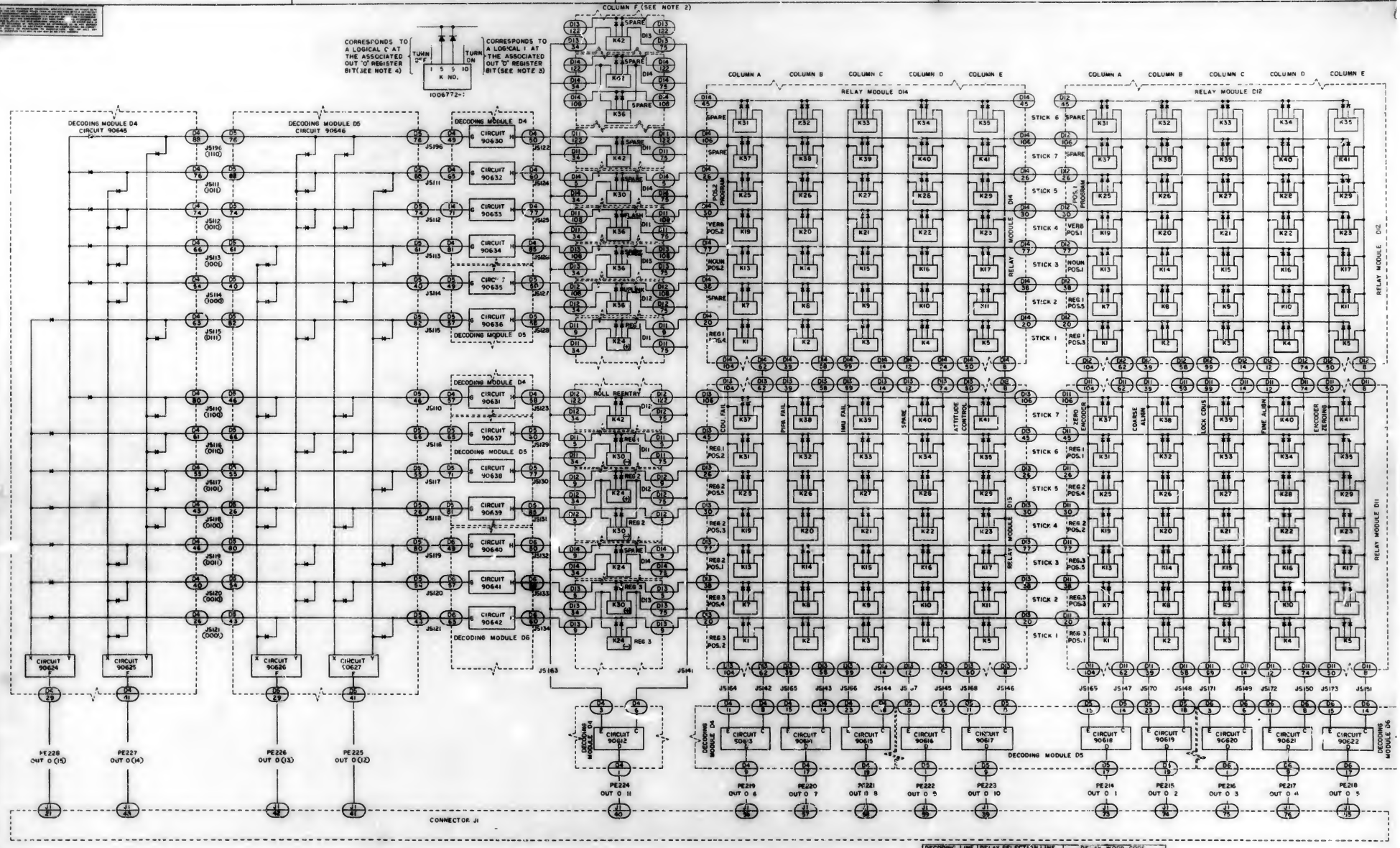
MIT APPROVAL [illegible]

SCHEMATIC
KEYBOARD MODULE
(AGC KEYBOARD)

DSK IDENT NO —— SIZE F NASA DRAWING NO 1006160
SCALE NONE WT SHEET 1 OF 2

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY EAL-D-70327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS
   - K24 – STICK 4
   - K30 – STICK 5
   - K36 – STICK 6
   - K42 – STICK 7
3. A LOGICAL '1' IN OUT O PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL '0' IN OUT O PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT(SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESCMT(SEE NOTES 3 & 4)

REF DWGS

1. 1006165 – INTERCONNECTION DIAGRAM
2. 1006161 – RELAY MODULE SCHEMATIC
3. 1006162 – DECODING MODULE SCHEMATIC
4. 1006079 – INTERFACE DRAWING
5. 1004281 – SIGNAL PIN ASSIGNMENTS
6. 1006779-1 – RELAY, ARMATURE
7. 1004840 – AGC KEYBOARD & DISPLAY
8. 1006816-2 – RELAY, ARMATURE

TYPE 'C' & 'R' CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
J5196	J5122	1	1	1	0
J5111	J5124	1	1	0	1
J5112	J5125	1	1	0	0
J5113	J5126	1	0	1	1
J5114	J5127	1	0	1	0
J5115	J5128	1	0	0	1
J5110	J5123	1	0	0	0
J5116	J5129	0	1	1	1
J5117	J5130	0	1	1	0
J5118	J5131	0	1	0	1
J5119	J5132	0	1	0	0
J5120	J5133	0	0	1	1
J5121	J5134	0	0	1	0

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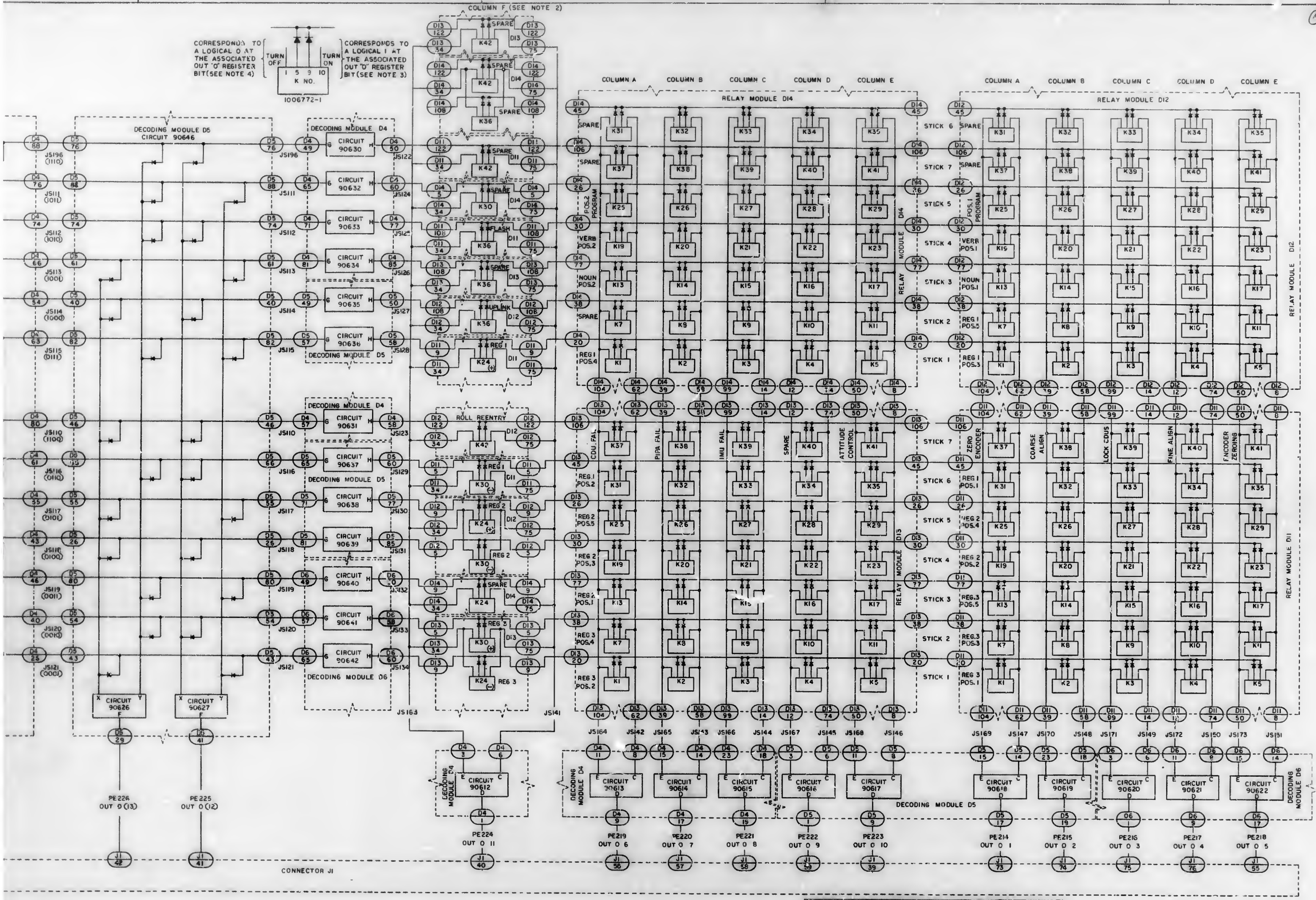

DIGIT DISPLAYED	RELAY COLUMN				
	A	B	C	D	E
0	1	0	1	0	1
1	1	1	0	0	0
2	1	0	0	1	1
3	1	1	0	1	1
4	1	1	1	1	0
5	0	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

... WITH
...0327
...ODULES
... STICKS

...OW IMPEDENCE
...ACE
...IGH IMPEDENCE
...ACE

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006815-2 - RELAY, ARMATURE

TYPE "C" & "R" CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LIKE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JS196	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

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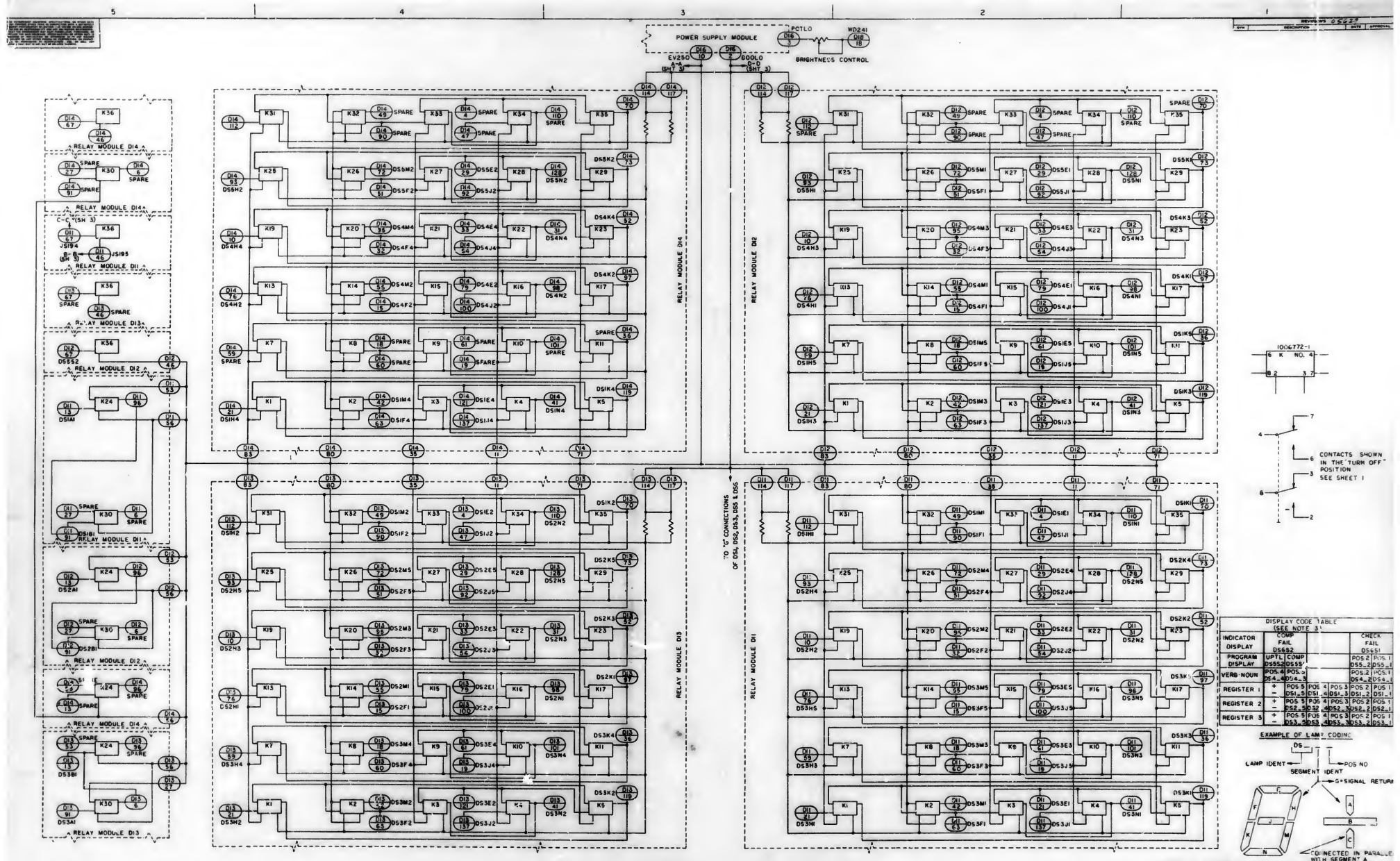
INTERCONNECTION FLOW DIAGRAM
AGC DSKY MAIN

CODE IDENT NO: —
SIZE: J
NASA DRAWING NO: 1006166
SCALE
WT
SHEET 1 OF 3

1006166



TYPE 'R' CONTACT NETWORK

DISPLAY CODE TABLE (SEE NOTE 3)							
INDICATOR DISPLAY	COMP FAIL DS552					CHECK FAIL DS551	
PROGRAM DISPLAY	UPTL DS552	COMP DS551				POS 2 DS5_2	POS 1 DS5_1
VERB-NOUN	POS 4 DS4_2	POS 3 DS4_3				POS 2 DS4_2	POS 1 DS4_1
REGISTER 1	+	POS 5 DS1_5	POS 4 DS1_4	POS 3 DS1_3	POS 2 DS1_2	POS 1 DS1_1	
	−						
REGISTER 2	+	POS 5 DS2_5	POS 4 DS2_4	POS 3 DS2_3	POS 2 DS2_2	POS 1 DS2_1	
	−						
REGISTER 3	+	POS 5 DS3_5	POS 4 DS3_4	POS 3 DS3_3	POS 2 DS3_2	POS 1 DS3_1	
	−						

EXAMPLE OF LAMP CODING

DS
LAMP IDENT
POS NO
SEGMENT IDENT
G=SIGNAL RETURN
CONNECTED IN PARALLEL WITH SEGMENT A

QTY REQD	PART OR IDENTYING NO	NOMENCLATURE OR DESCRIPTION	FSCM NO
		LIST C MATERIALS	

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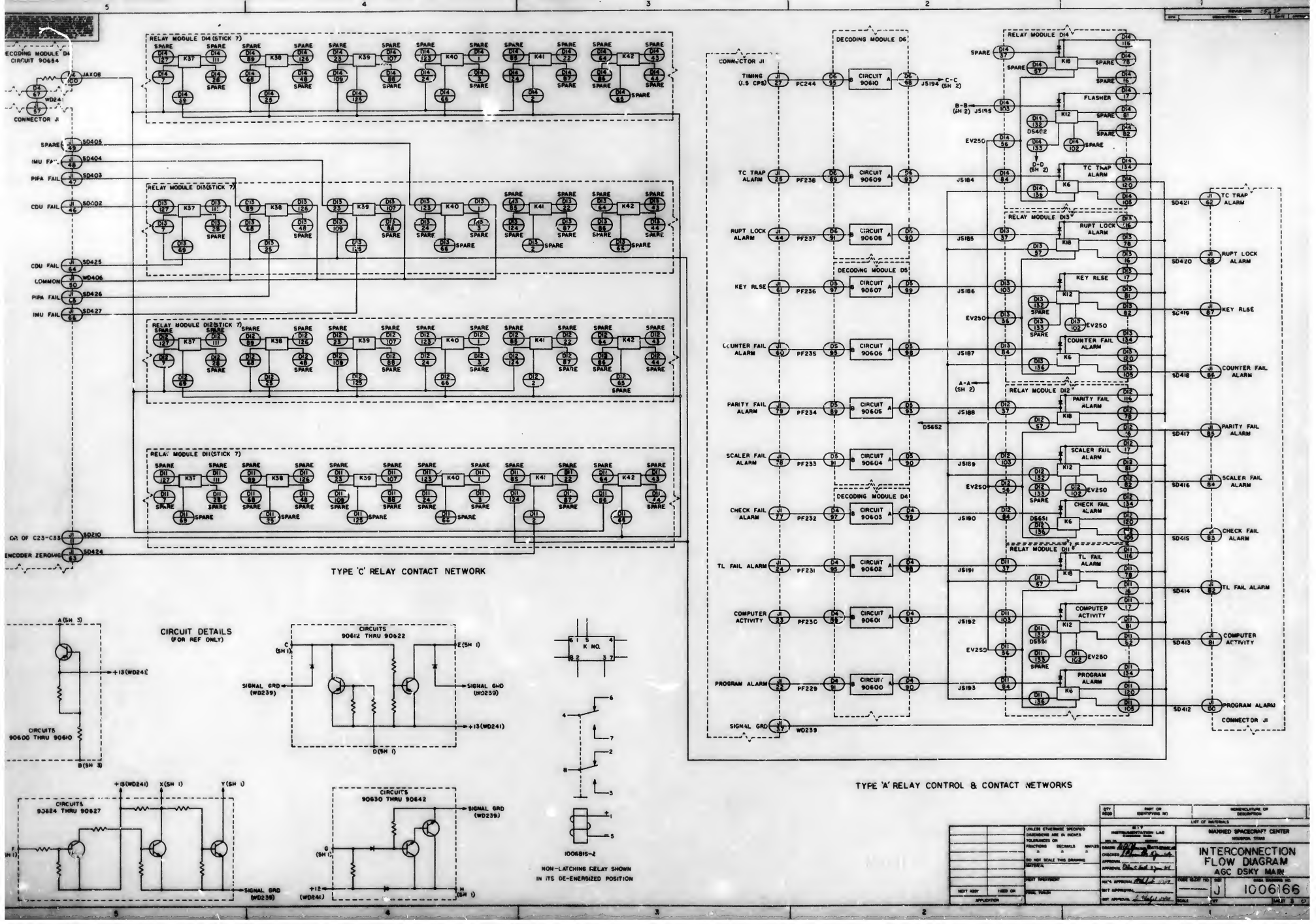
INTERCONNECTION FLOW DIAGRAM AGC DSKY, MAIN

CODE IDENT NO. SIZE J
SCALE WT
FSCM DRAWING NO. 1006166
SHEET 2 of 2



TYPE 'C' RELAY CONTACT NETWORK

CIRCUIT DETAILS
(FOR REF ONLY)

NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION

TYPE 'A' RELAY CONTROL & CONTACT NETWORKS

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
		LIST OF MATERIALS

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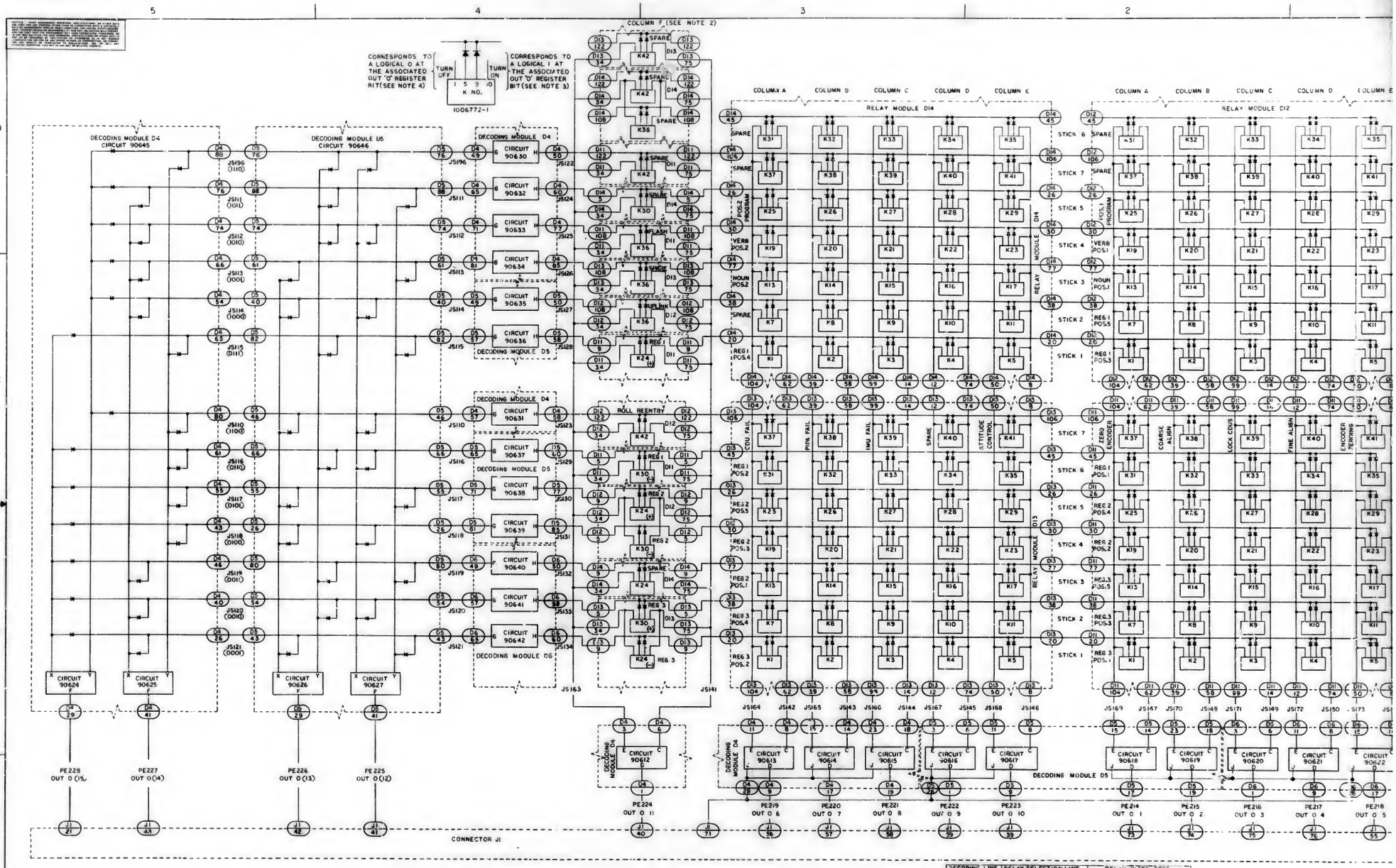
INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN

CODE IDENT NO. J SIZE

DRAWING NO. 1006166

SCALE WT SHEET 3 OF 3



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-7I0327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS
   - K24 - STICK 4
   - K30 - STICK 5
   - K36 - STICK 6
   - K42 - STICK 7
3. A LOGICAL '1' IN OUT O PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL '0' IN OUT O PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT(SEE NOTES 3&4)
6. GROUNDED WHEN INDICATED CODE PRESENT(SEE NOTES 3&4)

RL DWGS

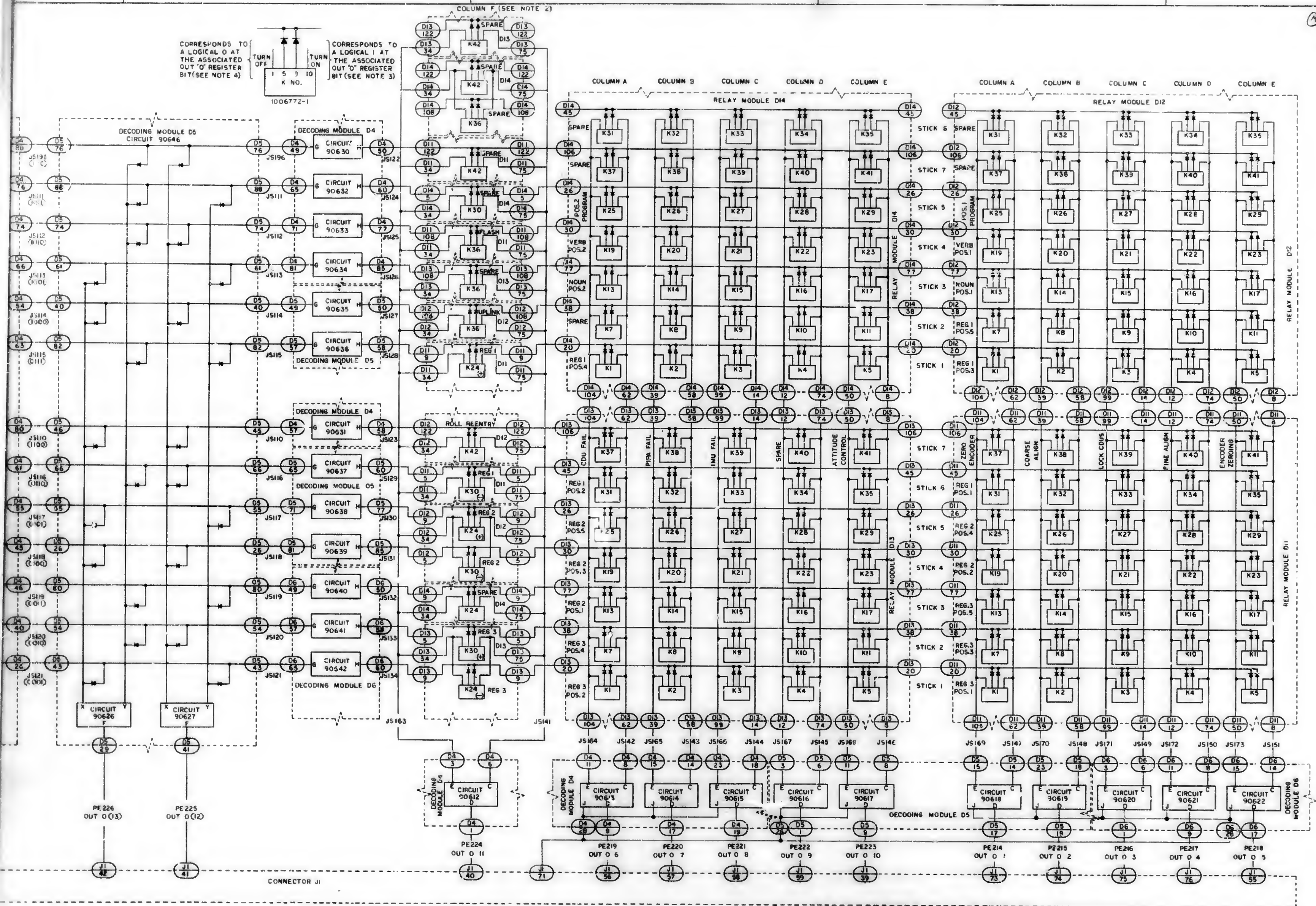
1. 1006165- INTERCONNECTION DIAGRAM
2. 1006161- RELAY MODULE SCHEMATIC
3. 1006162- DECODING MODULE SCHEMATIC
4. 1006079- INTERFACE DRAWING
5. 1004251- SIGNAL PIN ASSIGNMENTS
6. 1006772-1- RELAY, ARMATURE
7. 1003940- AGC KEYBOARD & DISPLAY
8. 1006815-2-RELAY, ARMATURE

TYPE 'C' & 'R' CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE226	PE227	PE226	PE225
J5196	J5122	1	1	1	0
J5111	J5124	1	1	0	1
J5112	J5125	1	0	1	0
J5113	J5126	1	0	0	1
J5114	J5127	0	1	1	0
J5115	J5128	0	1	0	1
J5110	J5123	1	1	0	0
J5116	J5129	0	1	1	0
J5117	J5130	0	1	0	1
J5118	J5131	0	0	1	0
J5119	J5132	0	0	1	1
J5120	J5133	0	0	1	0
J5121	J5134	0	0	0	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINISH NEXT ASSY USED ON APPLICATION QTY REQD DRAWN CHECKED APPROVAL APPROVAL MFR'S APPROVAL MFR APPROVAL

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06050		



DIGIT DISPLAYED	RELAY COLUMN				
	A	B	C	D	E
0	1	0	1	0	1
1	1	1	0	0	0
2	1	0	0	1	1
3	1	1	0	1	1
4	1	1	1	1	0
5	D	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT(SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT(SEE NOTES 3 & 4)

REF DWGS

1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006815-2 - RELAY, ARMATURE

TYPE "C" & "R" CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JS196	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
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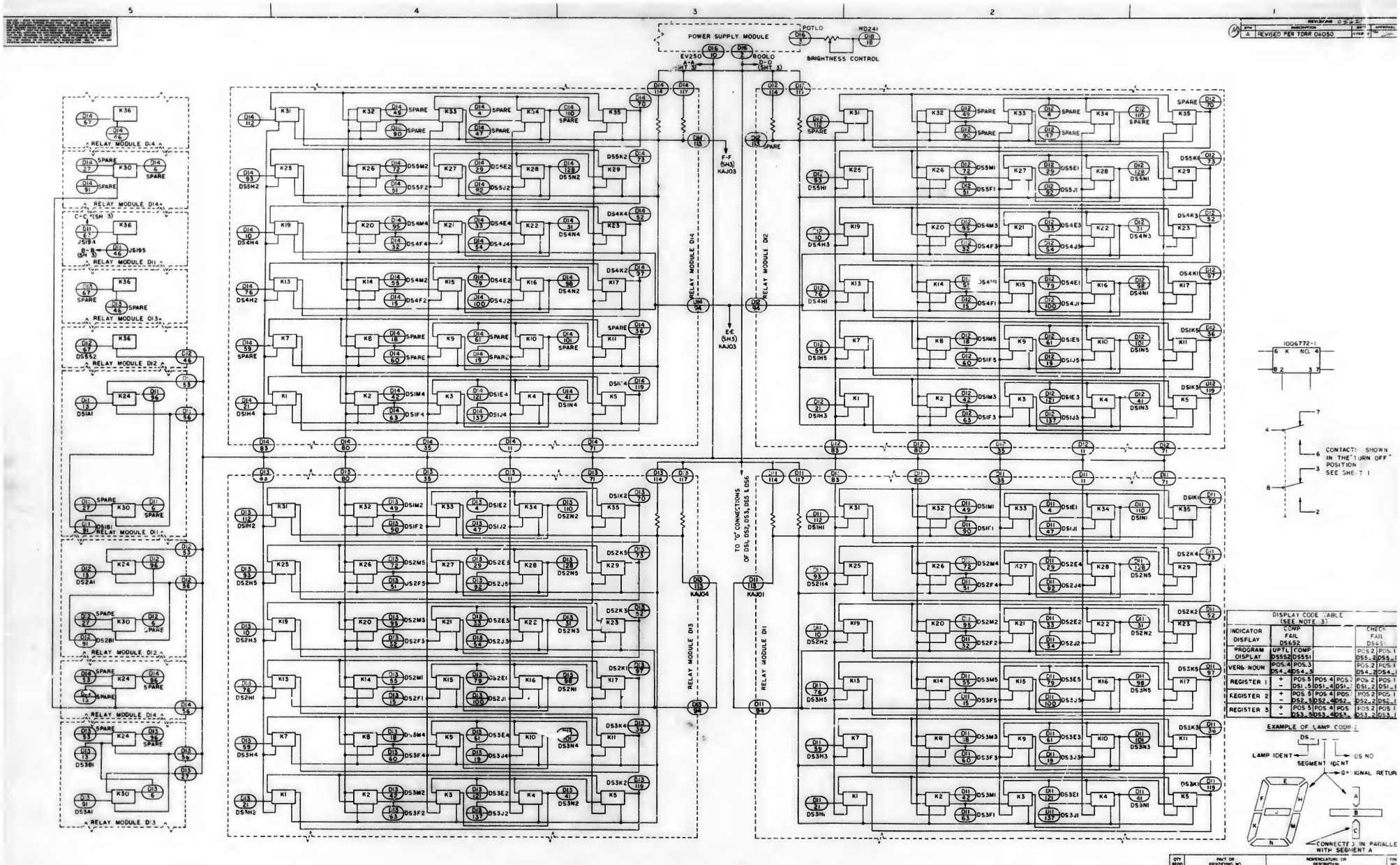
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN

CODE IDENT NO ——— | SIZE J | NASA DRAWING NO 1006166
SCALE | WT | SHEET 1 OF 3



TYPE "R" CONTACT NETWORK

REVISIONS			
BY	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06050		

1006772-1

DISPLAY CODE TABLE (SEE NOTE 3)

INDICATOR DISPLAY	COMP FAIL DS552			CHECK FAIL DS51
PROGRAM DISPLAY	UPTL DS552	COMP DS551		POS 2 DS5_2 POS 1 DS5_1
VERB-NOUN	POS 4 DS4_4	POS 3 DS4_3		POS 2 DS4_2 POS 1 DS4_1
REGISTER 1	+	POS 5 DS2_5	POS 4 DS2_4	POS 2 DS2_2 POS 1 DS2_1
	-	DS1_5	DS1_4	DS1_2 DS1_1
REGISTER 2	+	POS 5 DS2_5	POS 4 DS2_4	POS 2 DS2_2 POS 1 DS2_1
	-	DS3_5	DS3_4	DS3_2 DS3_1
REGISTER 3	+	POS 5 DS3_5	POS 4 DS3_4	POS 2 DS3_2 POS 1 DS3_1
	-			

EXAMPLE OF LAMP CODING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FSN NO

LIST OF MATERIALS

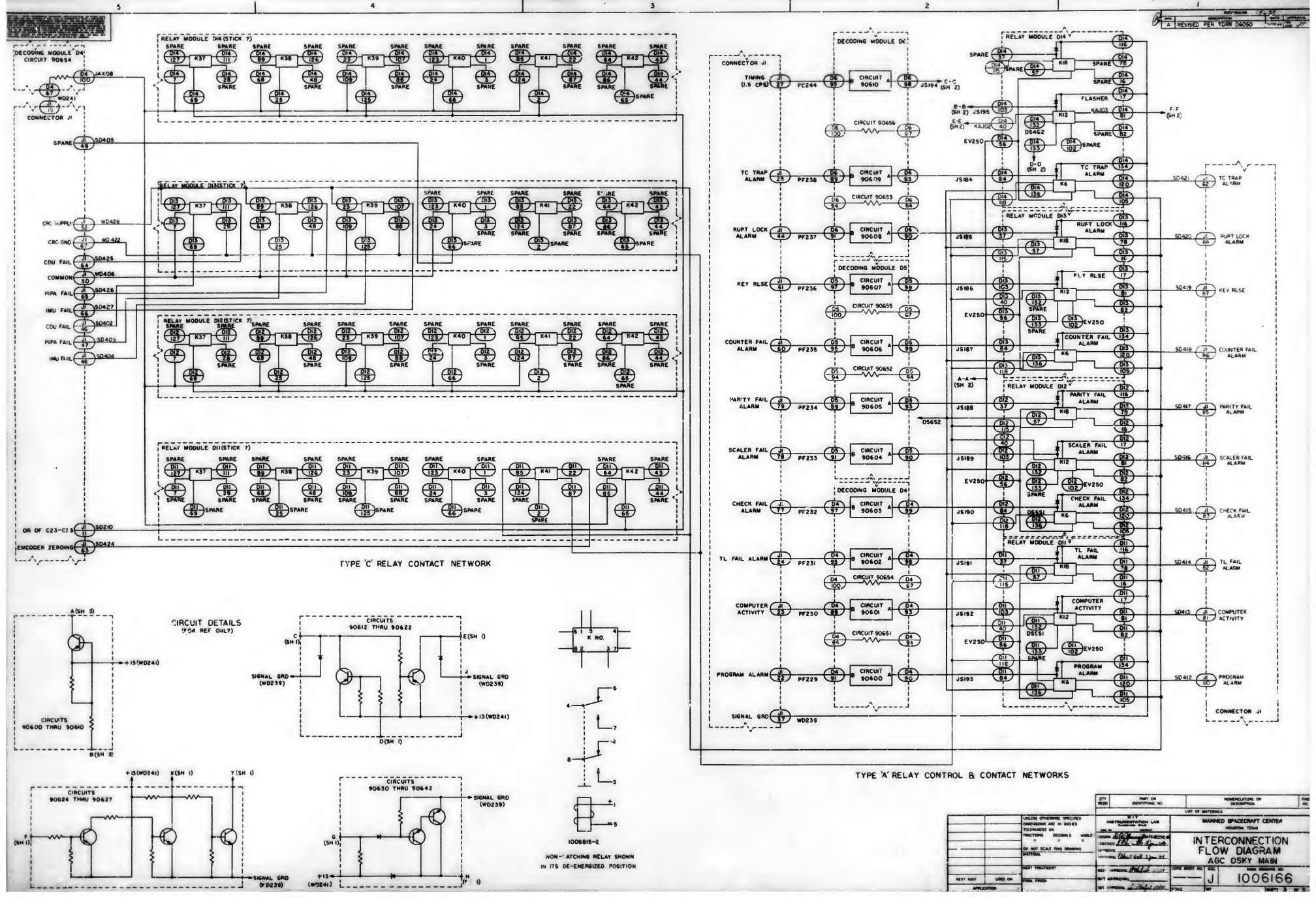
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON | APPLICATION

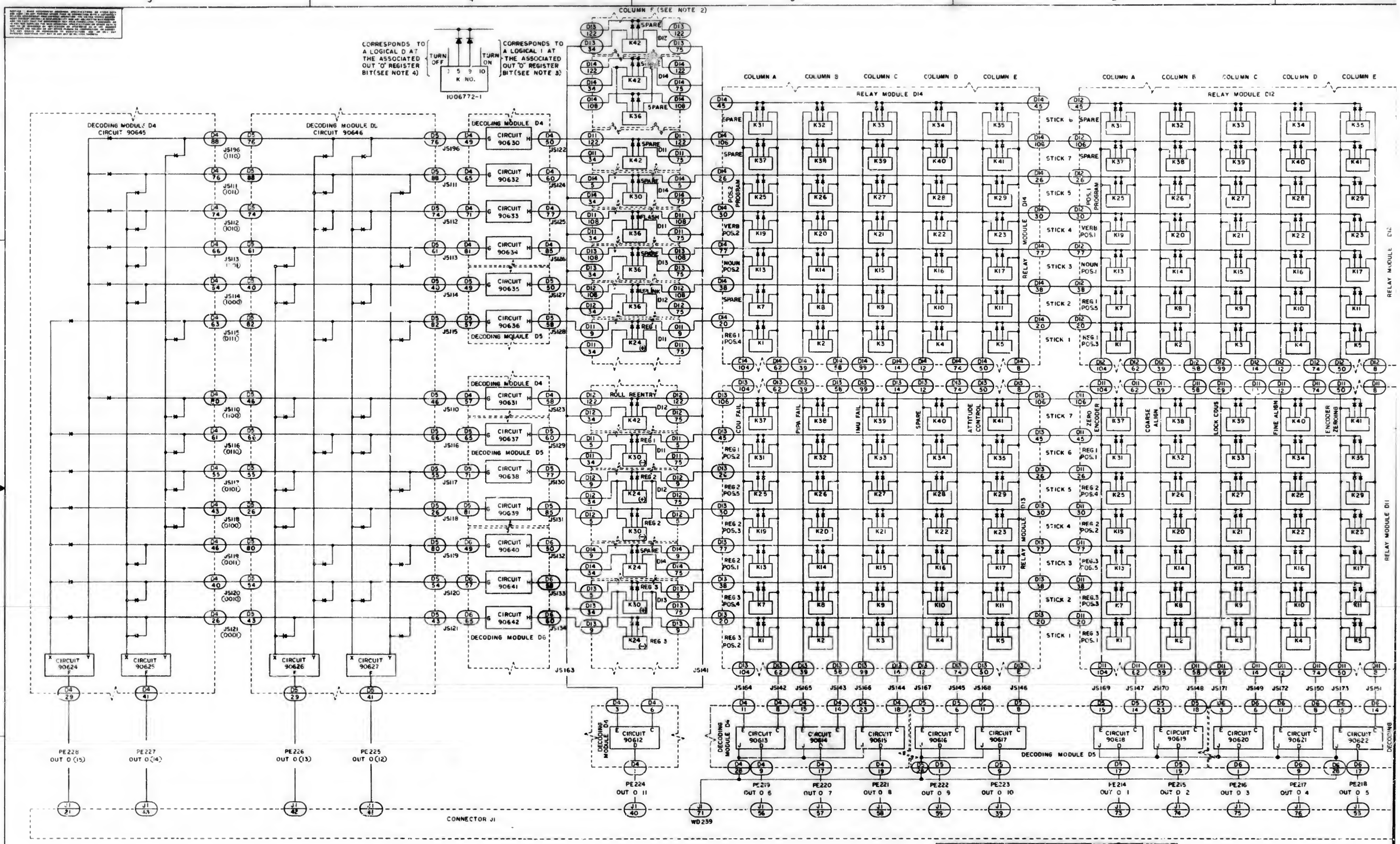
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN | DATE
CHECKED
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY, MAIN

CODE IDENT NO. J | SIZE | NASA ID-CONG NO. 1006166
SCALE | WT | SHEET 2 OF 3


REVISED PER YDRR 06050
RELAY MODULE D14 (STICK 7)
RELAY MODULE D13 (STICK 7)
RELAY MODULE D12 (STICK 7)
RELAY MODULE D11 (STICK 7)
DECODING MODULE D6
DECODING MODULE D5
DECODING MODULE D4
CONNECTOR J1
TIMING (1.5 CPS)
TC TRAP ALARM
RUPT LOCK ALARM
KEY RLSE
COUNTER FAIL ALARM
PARITY FAIL ALARM
SCALER FAIL ALARM
CHECK FAIL ALARM
TL FAIL ALARM
COMPUTER ACTIVITY
PROGRAM ALARM
SIGNAL GRD
FLASHER
EV250
CRC SUPPLY
CRC GND
CDU FAIL
COMMON
PIPA FAIL
IMU FAIL
OR OF C23-C33
ENCODER ZEROING
TYPE 'C' RELAY CONTACT NETWORK
TYPE 'A' RELAY CONTROL & CONTACT NETWORKS
CIRCUIT DETAILS
(FOR REF ONLY)
CIRCUITS 90600 THRU 90610
CIRCUITS 90612 THRU 90622
CIRCUITS 90624 THRU 90627
CIRCUITS 90630 THRU 90642
K NO.
1006815-2
NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
INTERCONNECTION FLOW DIAGRAM
AGC DSKY MAIN
1006166



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS
   - K24 - STICK 4
   - K30 - STICK 5
   - K36 - STICK 6
   - K42 - STICK 7
3. A LOGICAL "1" IN OUT 0 PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL "0" IN OUT 0 PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006818-2 - RELAY, ARMATURE

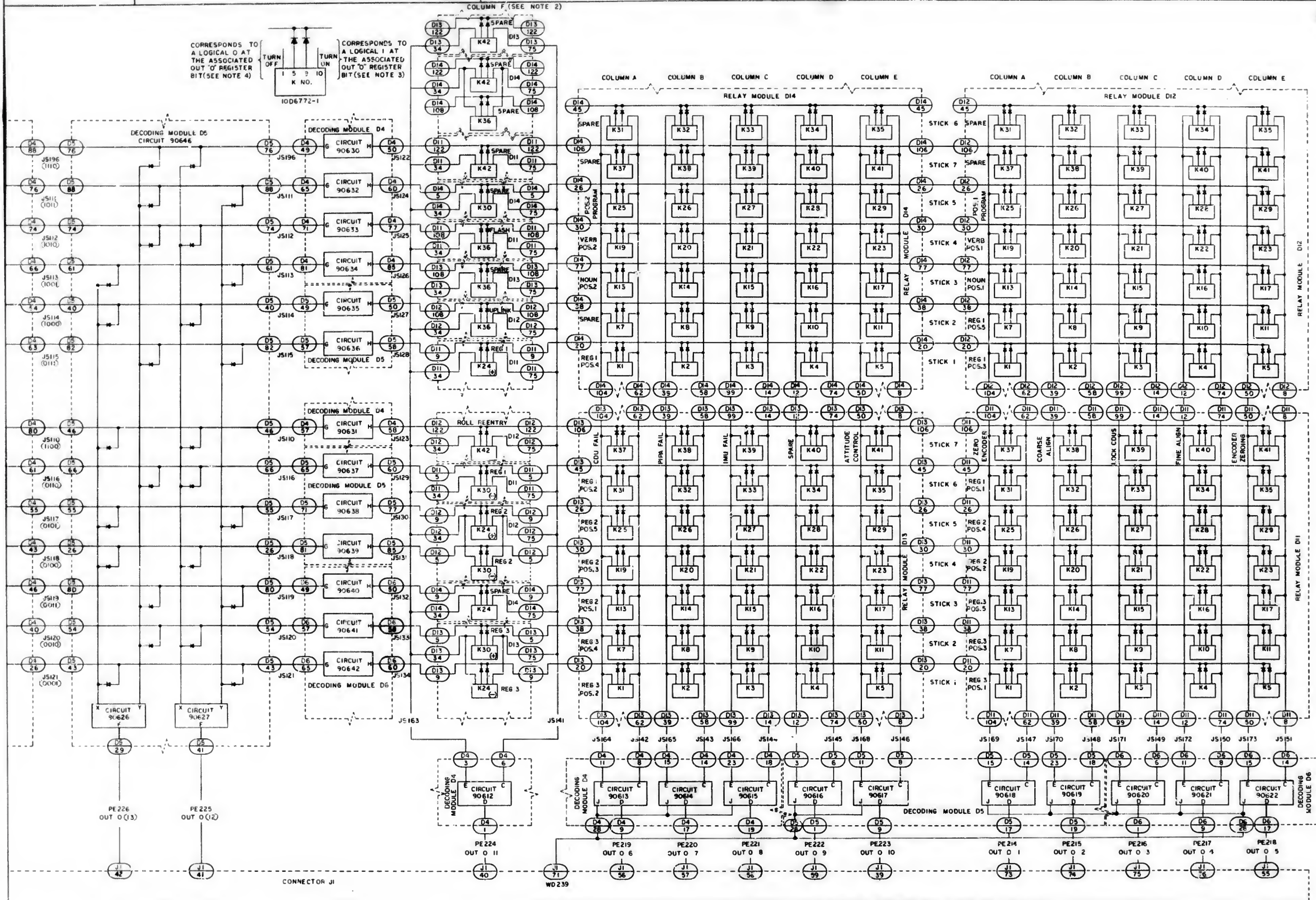
TYPE "C" & "R" CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JS196	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
APPLICATION
DRAWN
CHECKED
APPROVAL
NASA APPROVAL

1006166 B

SHEET 1



DIGIT DISPLAYED	RELAY COLUMN A	B	C	D	E
0	1	0	1	0	1
	1	1	0	0	0
2	1	0	0	1	1
3	1	1	0	1	1
4	1	1	1	1	0
5	0	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
JS196	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

TYPE "C" & "R" CONTROL NETWORK

...ITH
...327
...DULES
...TICKS

...W IMPEDENCE
...CE
...H IMPEDENCE
...CE

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006815-2 - RELAY, ARMATURE

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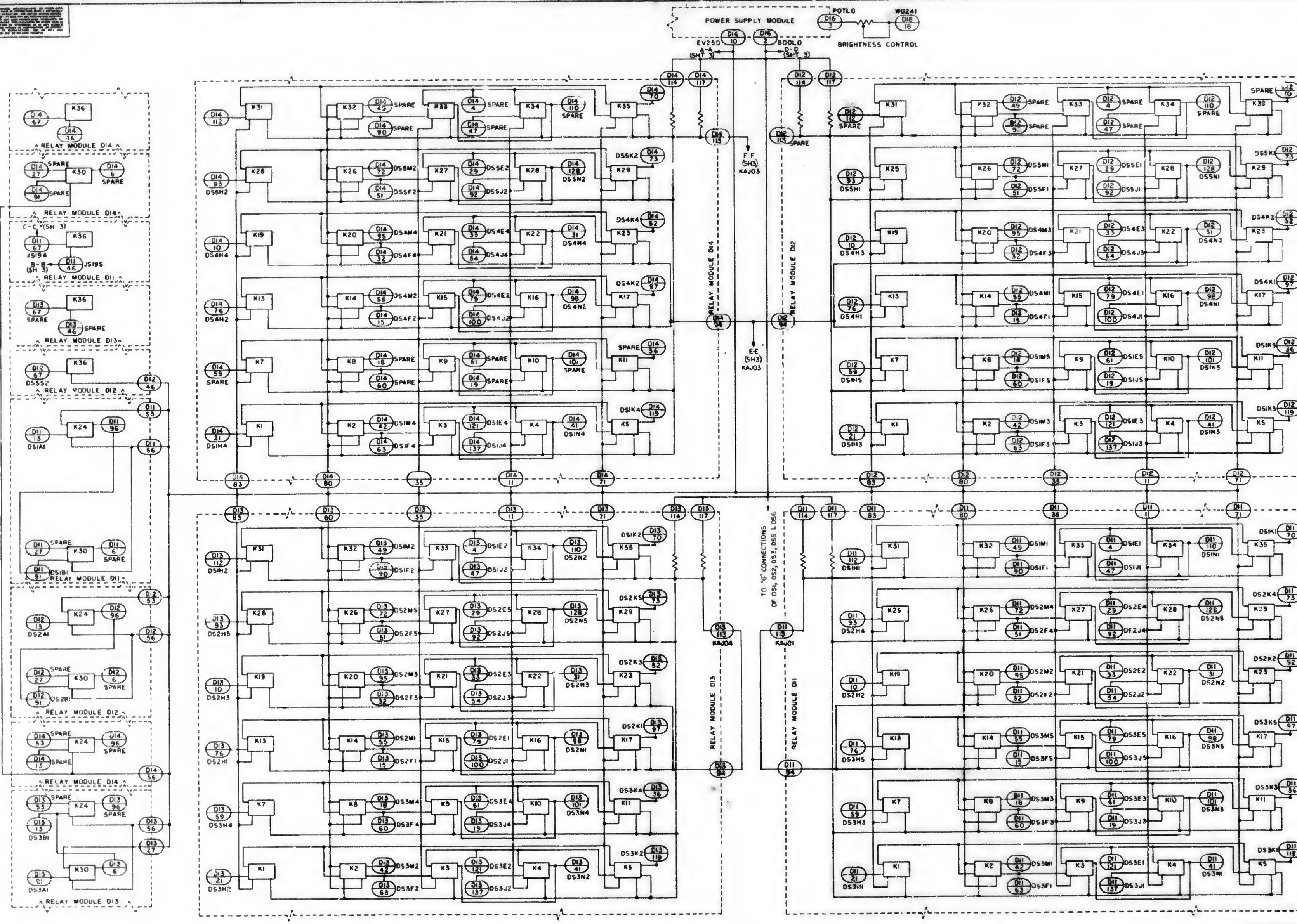
INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN

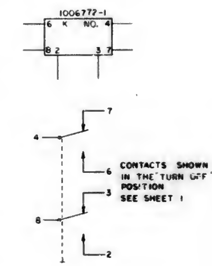
SIZE J — NASA DRAWING No. 1006166 — SHEET 1 OF 3

1006166 B

E-2/2

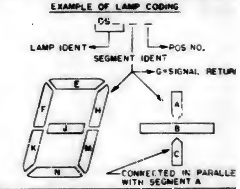
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR D605C		
B	CHANGED PER TDRR 09070 DR CHK		





DISPLAY CODE TABLE (SEE NOTE 3)						
INDICATOR DISPLAY	COMP FAIL DS6S2				CHECK FAIL DS6S1	
PROGRAM DISPLAY	UPTL DS5S2	COMP DS5S1			POS 2 DS5_2	POS 1 DS5_1
VERB NOUN	POS 4 DS4_4	POS 3 DS4_3			POS 2 DS4_2	POS 1 DS4_1
REGISTER 1	+ −	POS 5 DS1_5	POS 4 DS1_4	POS 3 DS1_3	POS 2 DS1_2	POS 1 DS1_1
REGISTER 2	+ −	POS 5 DS2_5	POS 4 DS2_4	POS 3 DS2_3	POS 2 DS2_2	POS 1 DS2_1
REGISTER 3	+ −	POS 5 DS3_5	POS 4 DS3_4	POS 3 DS3_3	POS 2 DS3_2	POS 1 DS3_1

EXAMPLE OF LAMP CODING



TYPE "R" CONTACT NETWORK

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION
LIST OF MATERIALS		

NEXT ASSY	USED ON
APPLICATION	

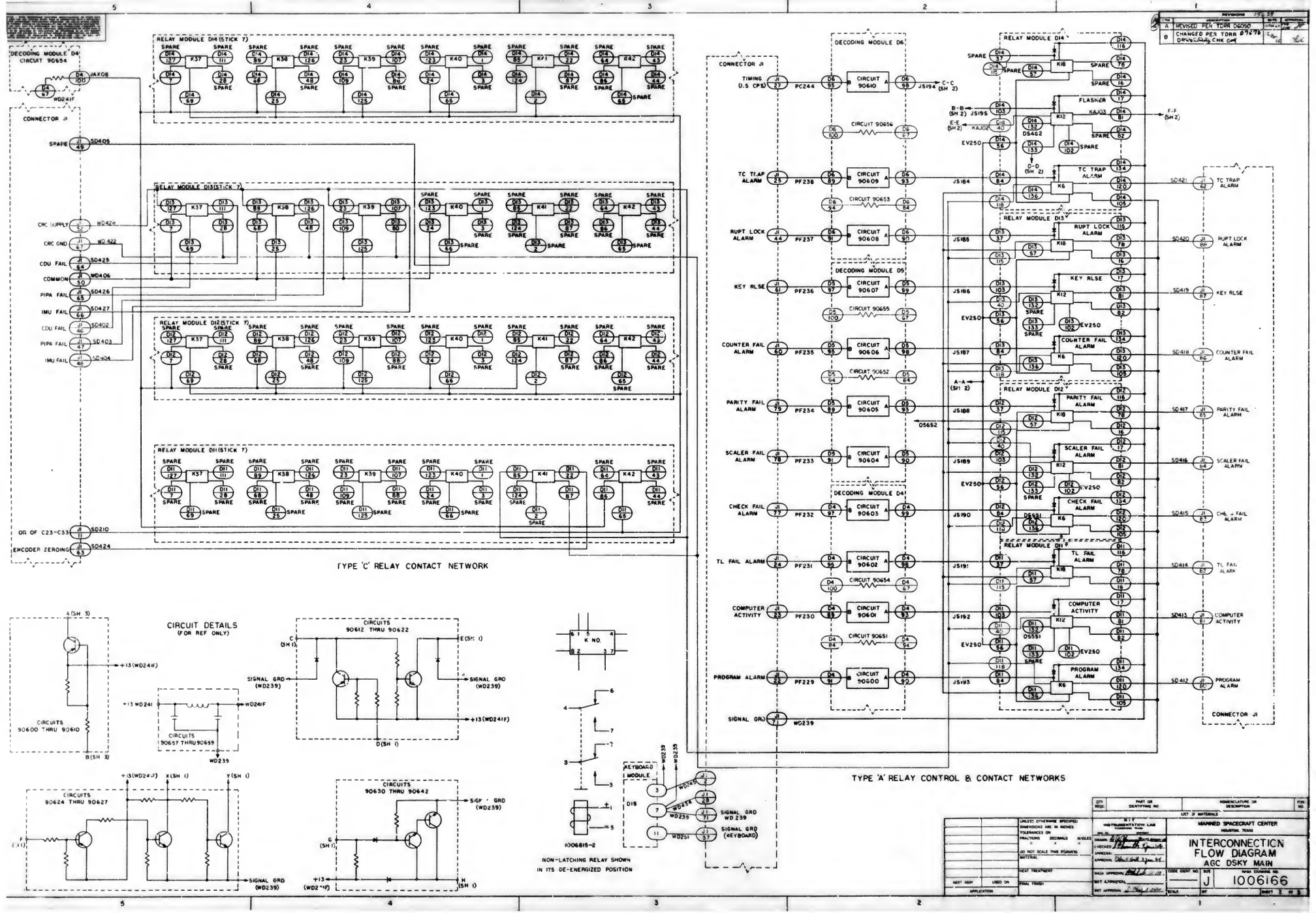
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

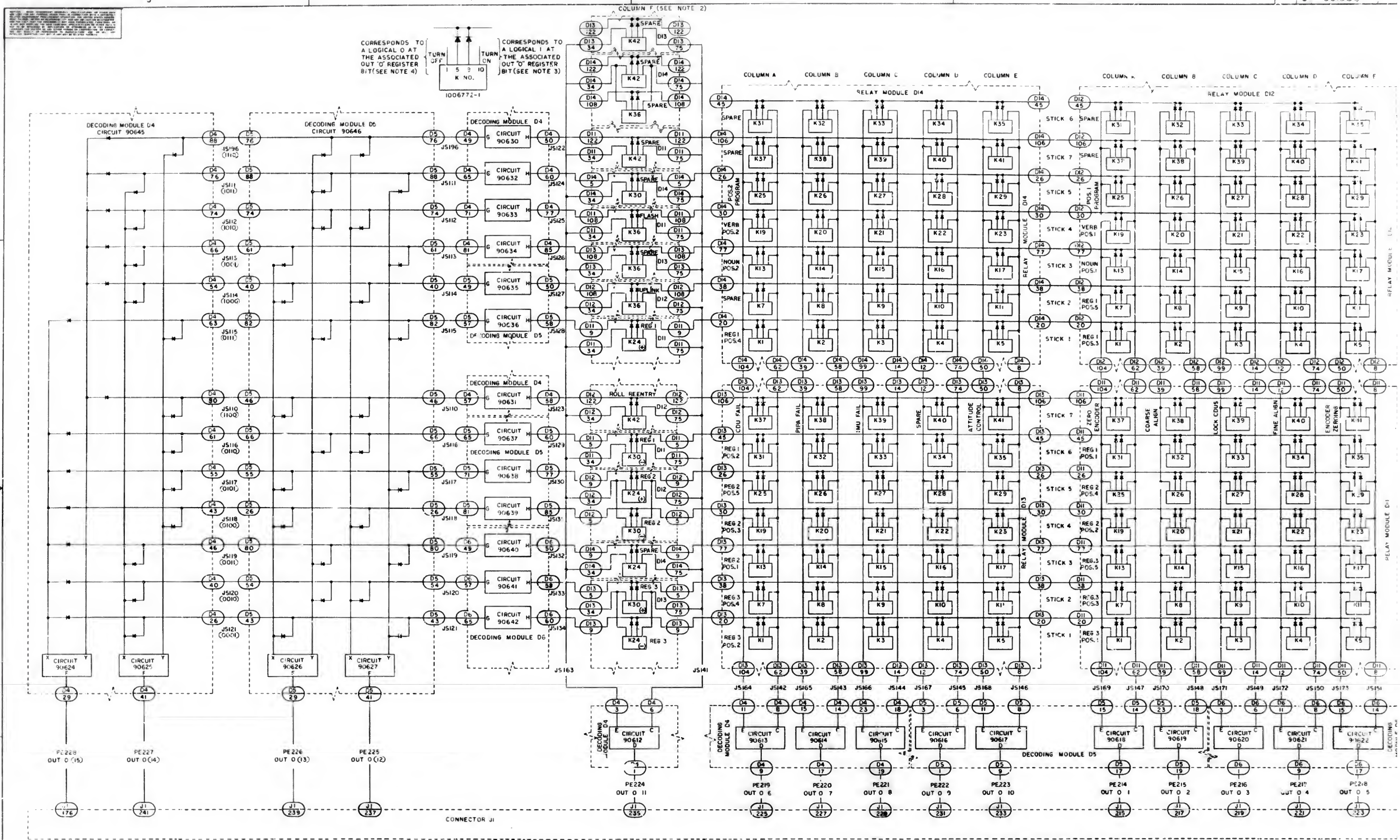
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY, MAIN

CODE IDENT NO | SIZE J | NASA DRAWING NO 1006166
SCALE | WT | SHEET 2 OF 3


REVISIONS
A REVISED PER TDRR 06050
B CHANGED PER TDRR 07278
DECODING MODULE D4 CIRCUIT 90654
CONNECTOR J1
RELAY MODULE D14 (STICK 7)
RELAY MODULE D13 (STICK 7)
RELAY MODULE D12 (STICK 7)
RELAY MODULE D11 (STICK 7)
CRC SUPPLY
CRC GND
CDU FAIL
COMMON
PIPA FAIL
IMU FAIL
CDU FAIL
PIPA FAIL
IMU FAIL
OR OF C23-C33
ENCODER ZEROING
TYPE 'C' RELAY CONTACT NETWORK
DECODING MODULE D6
DECODING MODULE D5
DECODING MODULE D4
CONNECTOR J1
TIMING (U.S CPS)
TC TRAP ALARM
RUPT LOCK ALARM
KEY RLSE
COUNTER FAIL ALARM
PARITY FAIL ALARM
SCALER FAIL ALARM
CHECK FAIL ALARM
TL FAIL ALARM
COMPUTER ACTIVITY
PROGRAM ALARM
SIGNAL GRD
CIRCUIT 90610
CIRCUIT 90609
CIRCUIT 90608
CIRCUIT 90607
CIRCUIT 90606
CIRCUIT 90605
CIRCUIT 90604
CIRCUIT 90603
CIRCUIT 90602
CIRCUIT 90601
CIRCUIT 90600
RELAY MODULE D14
RELAY MODULE D13
RELAY MODULE D12
RELAY MODULE D11
FLASHER
TYPE 'A' RELAY CONTROL & CONTACT NETWORKS
CIRCUIT DETAILS (FOR REF ONLY)
CIRCUITS 90600 THRU 90610
CIRCUITS 90612 THRU 90622
CIRCUITS 90624 THRU 90627
CIRCUITS 90630 THRU 90642
CIRCUITS 90657 THRU 90659
SIGNAL GRD (WD239)
+13 (WD241F)
K NO.
KEYBOARD MODULE
SIGNAL GRD (KEYBOARD)
1006815-2
NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION
INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
1006166



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS
   - K24 - STICK 4
   - K30 - STICK 5
   - K36 - STICK 6
   - K42 - STICK 7
3. A LOGICAL "1" IN OUT 0 PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL "0" IN OUT 0 PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006815-2 - RELAY, ARMATURE

TYPE "C" & "R" CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JS196	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

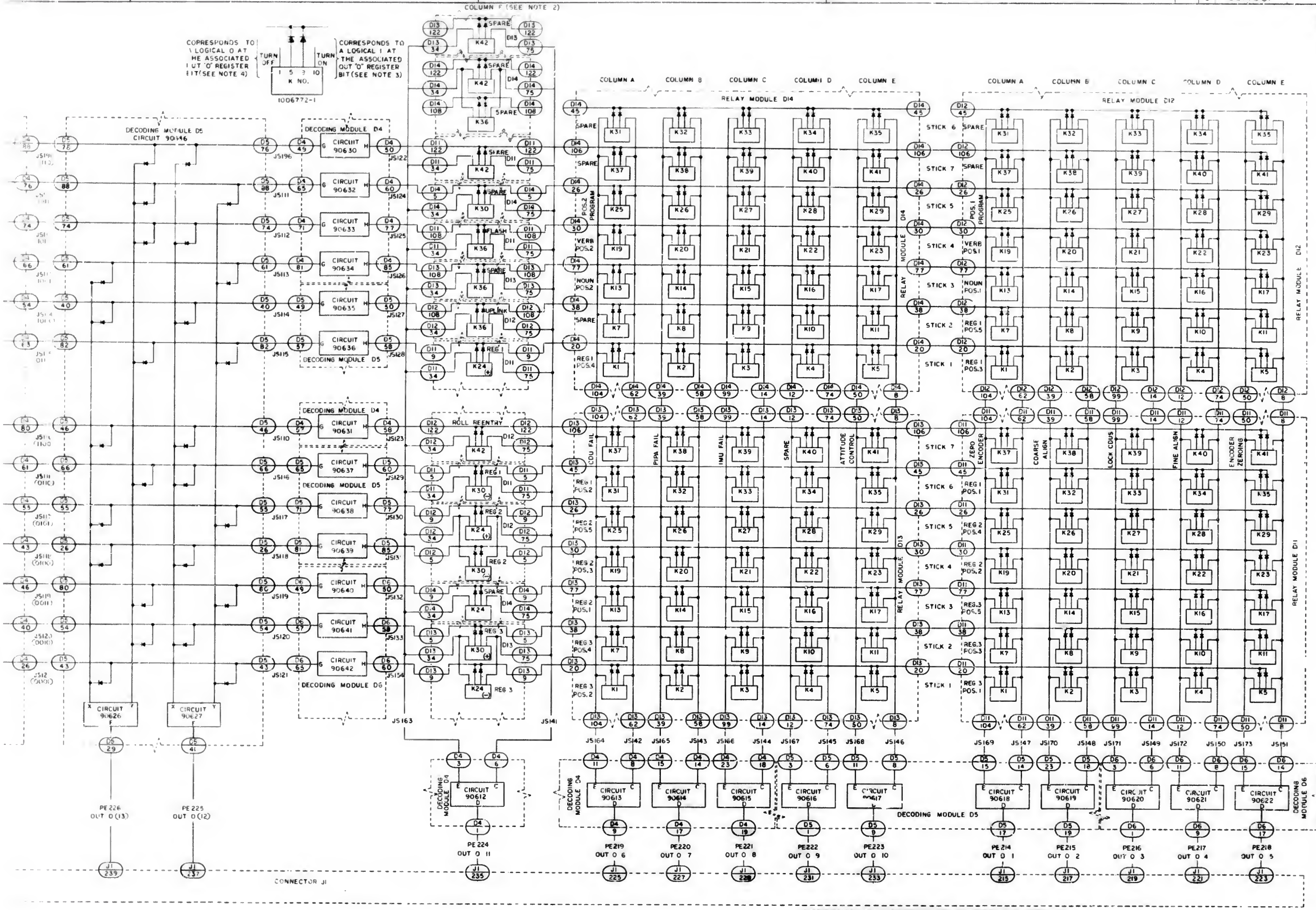
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
DO NOT SCALE THIS DRAWING

1006166 C

SHEET 1

9919001

REV	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06050		
B	CHANGED PER TDRR 07070 DR CHK		
C	REVISED PER TDRR 07644 DR CHK		



DIGIT DISPLAYED	RELAY COLUMN A	B	C	D	E
0	1	0	1	0	1
1	1	1	0	0	0
2	1	0	0	1	1
3	1	1	0	1	1
4	1	1	1	1	0
5	0	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
JS156	JS122	1	1	1	0
JS111	JS124	1	0	1	1
JS112	JS125	1	0	1	0
JS113	JS126	1	0	0	1
JS114	JS127	1	0	0	0
JS115	JS128	0	1	1	1
JS110	JS123	1	1	0	0
JS116	JS129	0	1	1	0
JS117	JS130	0	1	0	1
JS118	JS131	0	1	0	0
JS119	JS132	0	0	1	1
JS120	JS133	0	0	1	0
JS121	JS134	0	0	0	1

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006165 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006079 - INTERFACE DRAWING
5. 1004251 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003540 - AGC KEYBOARD & DISPLAY
8. 1006815-2 - RELAY, ARMATURE

TYPE 'C' & 'R' CONTROL NETWORK

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM
AGC DSKY MAIN

CODE IDENT NO —— | SIZE J | NASA DRAWING NO 1006166
SCALE | WT | SHEET 1 OF 4

1006166 C

E-2/2

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 06050 DR S. CHK		
B	CHANGED PER TDRR 07870 DR S. CHK		
C	REVISED PER TDRR 07624 DR S. CHK		

POWER SUPPLY MODULE

POTLD

WD241

BRIGHTNESS CONTROL

EV250 A-A (SHT 3)

6DOLO D-D (SHT 3)

C-C (SH 3)

B-B (SH 3)

F-F (SH3) KAJ03

E-E (SH3) KAJ03

TO "G" CONNECTIONS OF DS1, DS2, DS3, DS4, DS5

KAJ01

KAJ04

RELAY MODULE DI

RELAY MODULE DI1

RELAY MODULE DI2

RELAY MODULE DI3

RELAY MODULE DI4

RELAY MODULE DI5

1006772-1

CONTACTS SHOWN IN THE TURN OFF POSITION SEE SHEET 1

DISPLAY CODE TABLE (SEE NOTE 3)					
INDICATOR DISPLAY	UP-T COMP FAIL DS4S2				CHECK FAIL DS6S2
PROGRAM DISPLAY	UP-T DS5S2	COMP DS5S1			POS 2 DS5_2
VERB NOUN	POS. 4 DS4_4	POS. 3 DS4_3			POS 2 DS4_2
REGISTER 1	+	POS 5 DS1_5	POS 4 DS1_4	POS 3 DS1_3	POS 2 DS1_2
	−				
REGISTER 2	+	POS 5 DS2_5	POS 4 DS2_4	POS 3 DS2_3	POS 2 DS2_2
	−				
REGISTER 3	+	POS 5 DS3_5	POS 4 DS3_4	POS 3 DS3_3	POS 2 DS3_2
	−				

EXAMPLE OF LAMP CODING

DS

LAMP IDENT

POS NO.

SEGMENT IDENT

G=SIGNAL RETURN

CONNECTED IN PARALLEL WITH SEGMENT A

TYPE "R" CONTACT NETWORK

QTY REQ'D	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ENG NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON FRACTIONS DECIMALS ANGLES. DO NOT SCALE THIS DRAWING. MATERIAL. HEAT TREATMENT. FINAL FINISH. NEXT ASSY USED ON APPLICATION

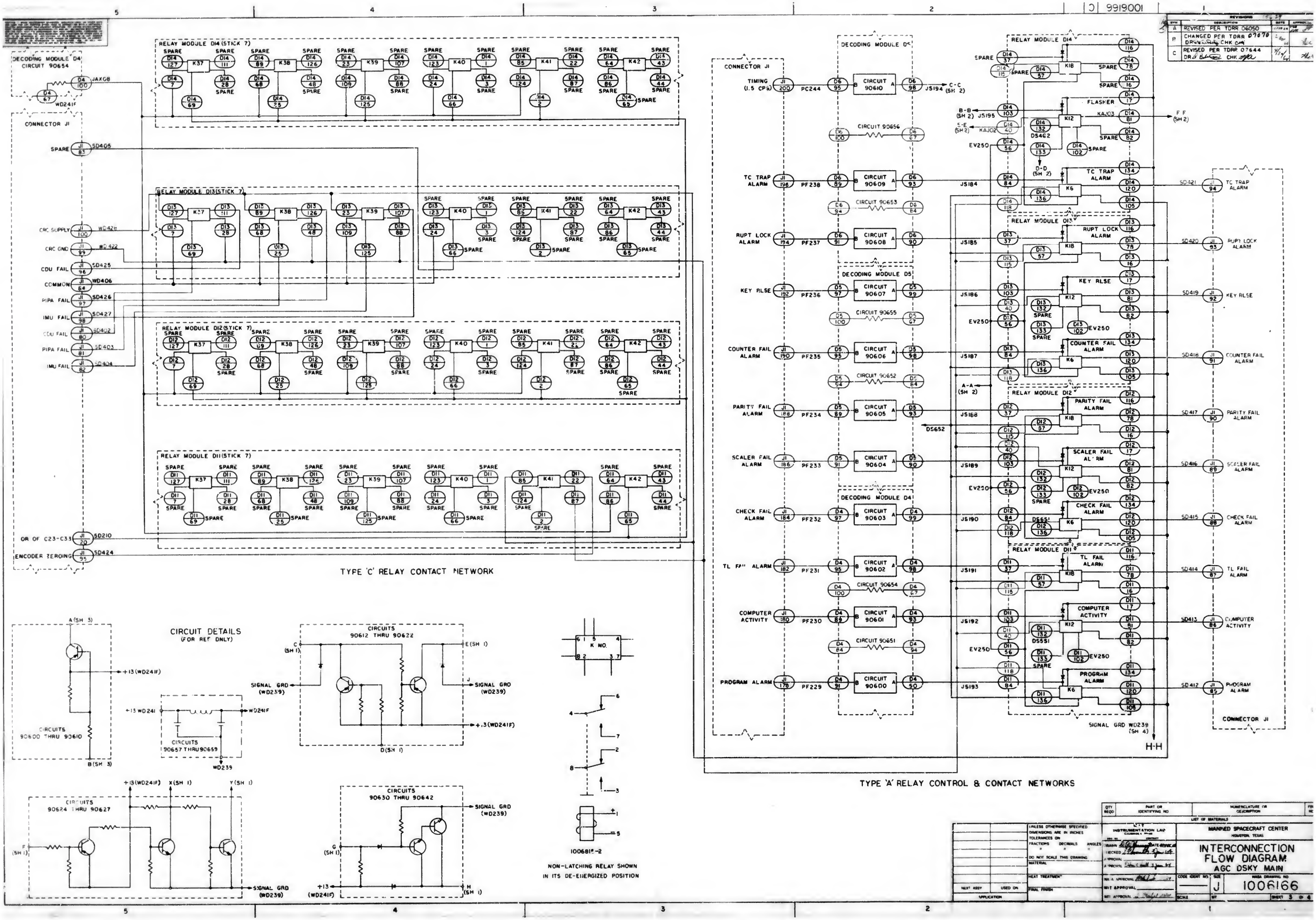
MIT INSTRUMENTATION LAB CAMBRIDGE MASS. DR CHECKED APPROVED NASA APPROVAL MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

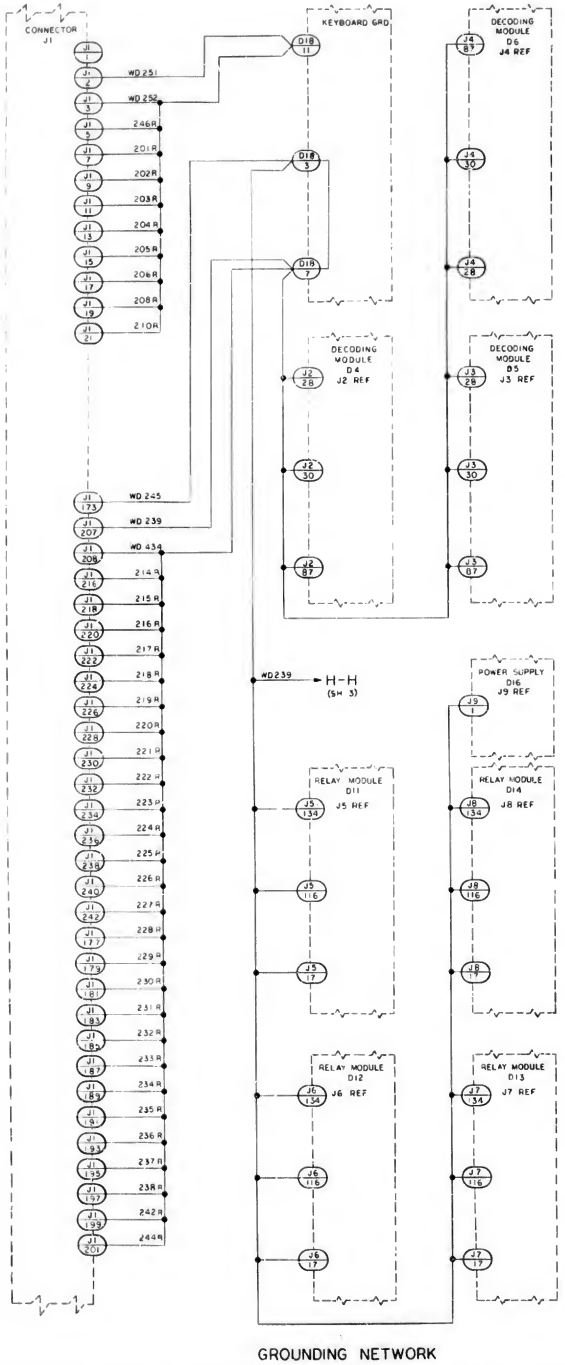
INTERCONNECTION FLOW DIAGRAM AGC DSKY, MAIN

CODE IDENT NO. 80126 SIZE J NASA DRAWING NO. 1006166

SCALE WT SHEET 2 OF 4



1006166 C
REVISIONS
A REVISED PER TDRR 06050
B CHANGED PER TDRR 07070
C REVISED PER TDRR 07644
DECODING MODULE D4 CIRCUIT 90654
CONNECTOR J1
SPARE
CRC SUPPLY
CRC GND
CDU FAIL
COMMON
PIPA FAIL
IMU FAIL
CDU FAIL
PIPA FAIL
IMU FAIL
OR OF C23-C33
ENCODER ZEROING
RELAY MODULE D14 (STICK 7)
RELAY MODULE D13 (STICK 7)
RELAY MODULE D12 (STICK 7)
RELAY MODULE D11 (STICK 7)
TYPE 'C' RELAY CONTACT NETWORK
TIMING (1.5 CPS)
TC TRAP ALARM
RUPT LOCK ALARM
KEY RLSE
COUNTER FAIL ALARM
PARITY FAIL ALARM
SCALER FAIL ALARM
CHECK FAIL ALARM
TL FAIL ALARM
COMPUTER ACTIVITY
PROGRAM ALARM
DECODING MODULE D6
DECODING MODULE D5
DECODING MODULE D4
CIRCUIT 90610
CIRCUIT 90609
CIRCUIT 90608
CIRCUIT 90607
CIRCUIT 90606
CIRCUIT 90605
CIRCUIT 90604
CIRCUIT 90603
CIRCUIT 90602
CIRCUIT 90601
CIRCUIT 90600
RELAY MODULE D14
RELAY MODULE D13
RELAY MODULE D12
RELAY MODULE D11
FLASHER
SIGNAL GRD WD239 (SH 4)
H-H
TYPE 'A' RELAY CONTROL & CONTACT NETWORKS
CIRCUIT DETAILS (FOR REF ONLY)
CIRCUITS 90600 THRU 90610
CIRCUITS 90657 THRU 90659
CIRCUITS 90612 THRU 90622
CIRCUITS 90624 THRU 90627
CIRCUITS 90630 THRU 90642
SIGNAL GRD (WD239)
K NO.
1006815-2
NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION
LIST OF MATERIALS
MANNED SPACECRAFT CENTER HOUSTON, TEXAS
INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN
J
1006166



GROUNDING NETWORK

REVISIONS			
QTY	DESCRIPTION	ECN	APPROVAL
C	THIS SHEET ADDED PER 1006R 07644		

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

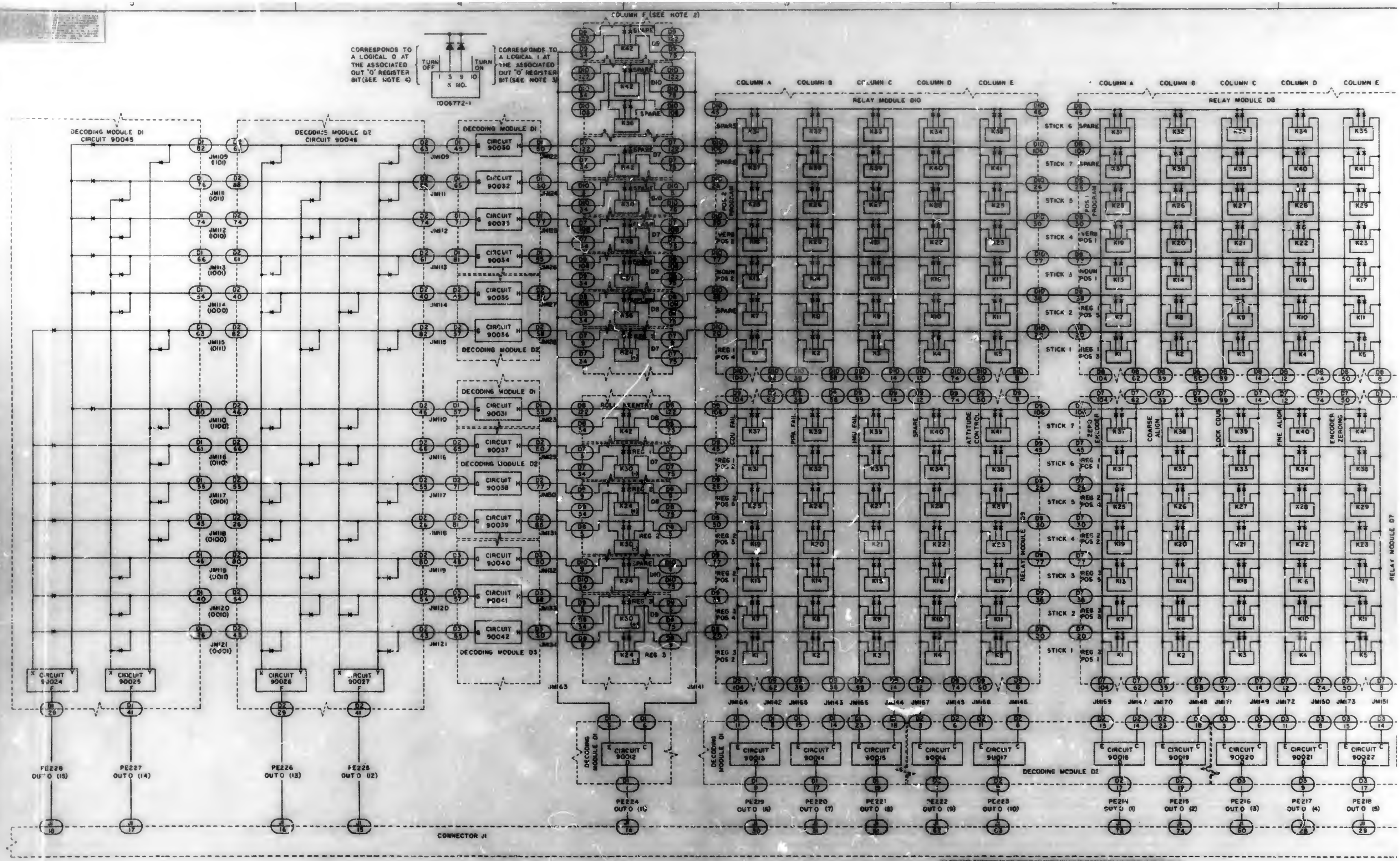
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN	DATE 4-6-66
CHECKED	
APPROVAL	
MSC APPROVAL	
MIT APPROVAL	

INTERCONNECTION FLOW DIAGRAM AGC DSKY MAIN

CONT IDENT NO. — | SIZE J | MSC DRAWING NO. 1006166

SCALE | WT | SHEET 4 OF 4



TYPE "C" & "R" CONTROL NETWORK

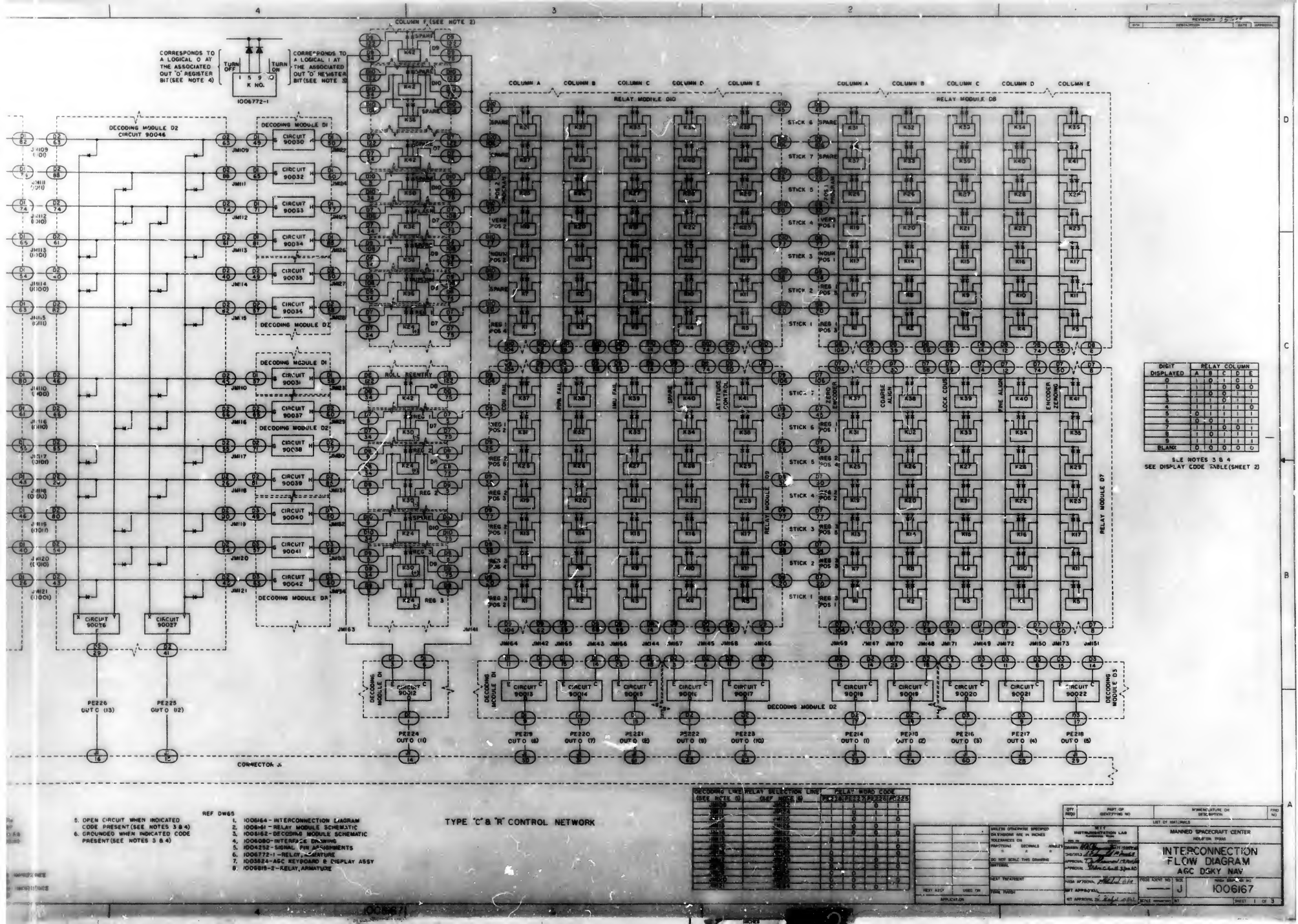
NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS:
   - K24 - STICK 4
   - K30 - STICK 5
   - K36 - STICK 6
   - K42 - STICK 7
3. A LOGICAL "1" IN OUT 0 PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL "0" IN OUT 0 PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS

1. 1006164 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006080 - INTERFACE DRAWING
5. 1004252 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003524 - AGC KEYBOARD & DISPLAY ASSY
8. 1006815-2 - RELAY, ARMATURE

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JM109	JM122	1	1	0	1
JM111	JM124	1	0	1	1
JM112	JM125	1	0	1	0
JM113	JM126	1	0	0	1
JM114	JM127	1	0	0	0
JM115	JM128	0	1	1	1
JM110	JM123	[illegible]	1	0	0
JM116	JM129	0	1	1	0
JM117	JM130	0	1	0	1
JM118	JM131	0	1	0	0
JM119	JM132	0	0	1	1
JM120	JM133	0	0	1	0
JM121	JM134	0	0	0	1



DIGIT DISPLAYED	RELAY COLUMN				
	A	B	C	D	E
0			0		0
1			0	0	0
2			0		0
3			0	0	0
4					0
5	0				0
6	0	0			
7			0	0	
8					
9				0	
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE214	PE215	PE216	PE225
					1
				0	0
				0	1
			0	1	0
			0	1	1
			1	0	0
			1	0	1
			1	1	0
			1	1	1
		0	0	0	0
		0	0	0	1
		0	0	1	0
		0	0	1	1
		0	1	0	0
		0	1	0	1
		0	1	1	0
		0	1	1	1

REF DWGS

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

1. 1006164 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006152 - DECODING MODULE SCHEMATIC
4. 1006280 - INTERFACE DRAWING
5. 1004252 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003824 - AGC KEYBOARD & DISPLAY ASSY
8. 1006815-2 - RELAY, ARMATURE

TYPE 'C' & 'R' CONTROL NETWORK

QTY REQ	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES
DO NOT SCALE THIS DRAWING
HEAT TREATMENT
FINISH
NEXT ASSY
USED ON
APPLICATION

MIT INSTRUMENTATION LAB
DRAWN
CHECKED
APPROVED
APPROVED
QUALITY ASSURANCE
MIT APPROVAL
MIT APPROVAL

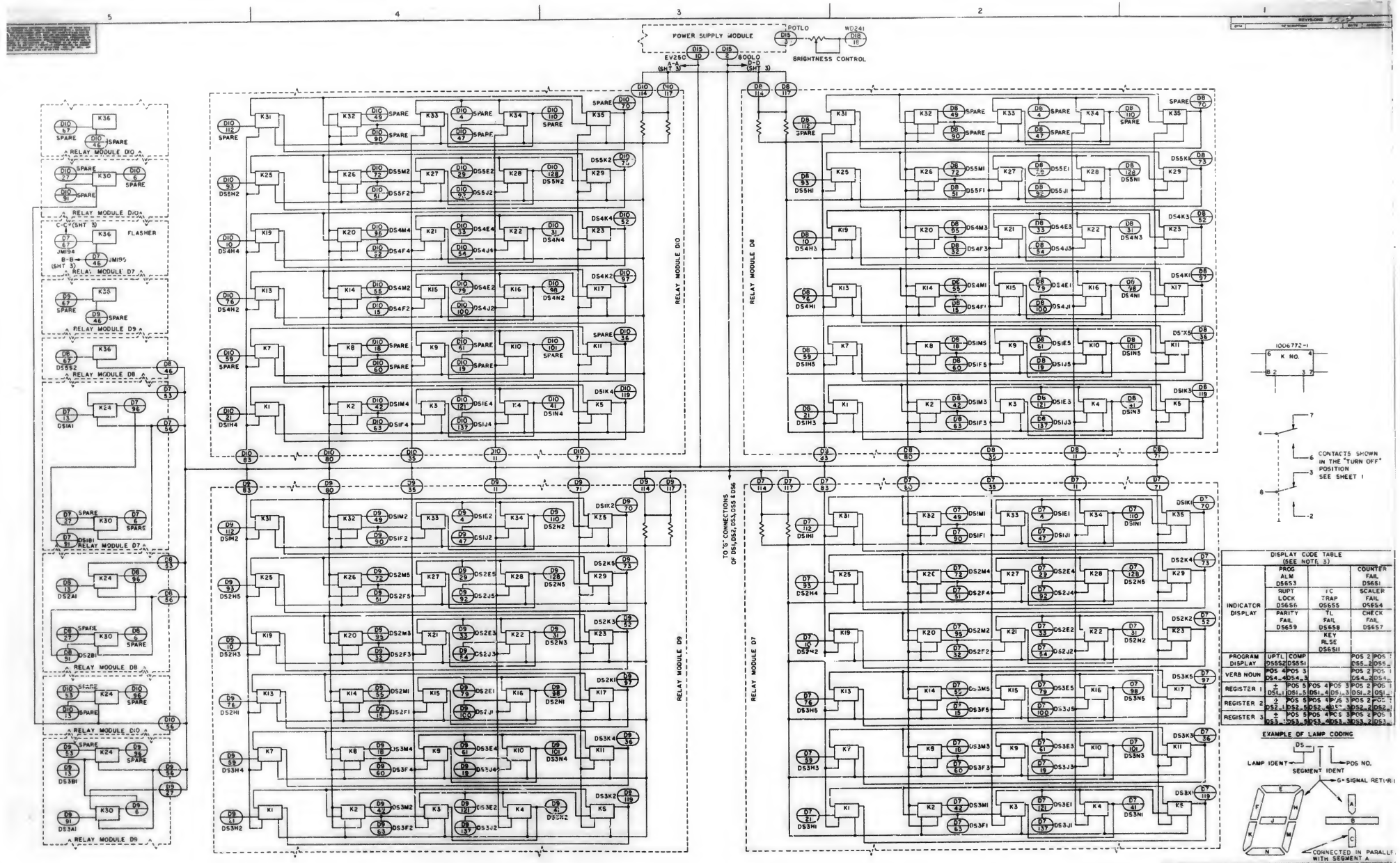
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV

CODE IDENT NO	SIZE	DRAWING NO
	J	1006167

SCALE — WT — SHEET 1 OF 3

1006167



TYPE 'R' CONTACT NETWORK

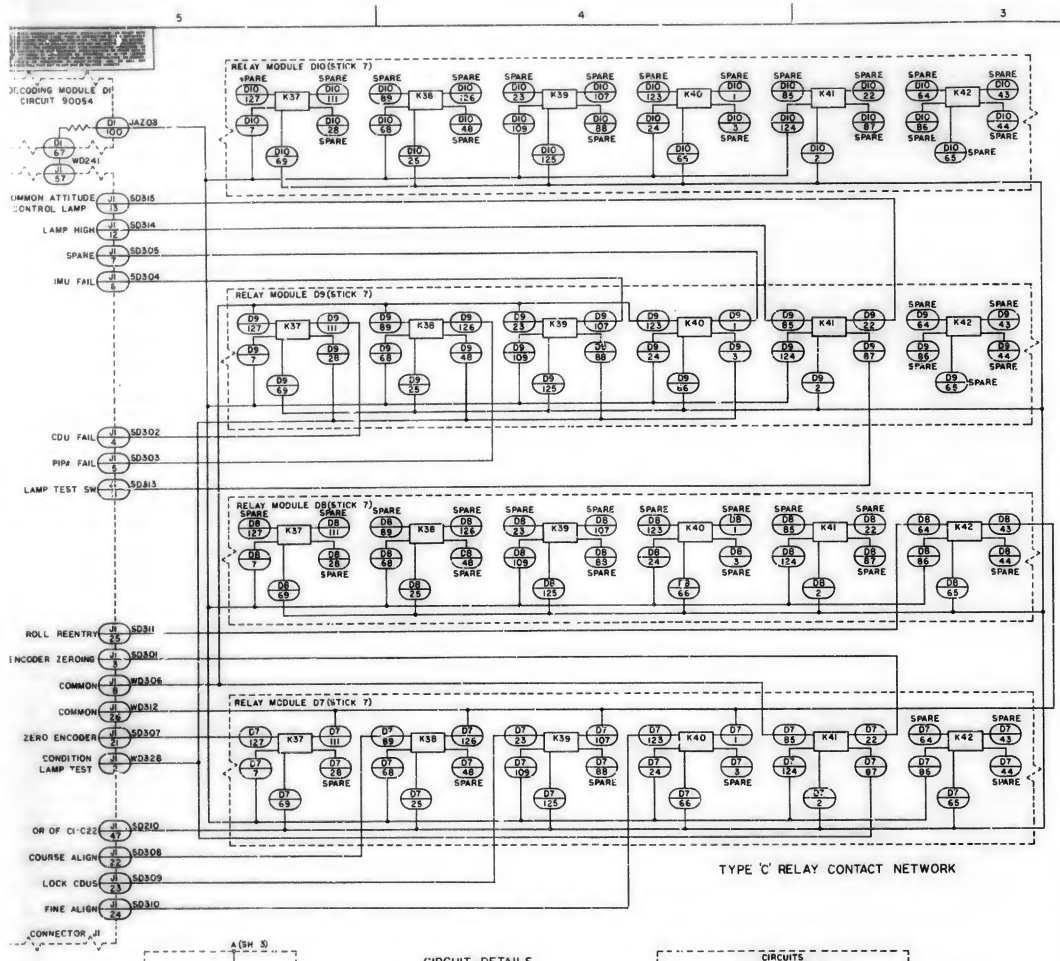
1006772-1

DISPLAY CODE TABLE (SEE NOTE 3)				
INDICATOR DISPLAY	PROG ALM DS653			COUNTER FAIL DS651
	RUPT LOCK DS656	TC TRAP DS655		SCALER FAIL DS654
	PARITY FAIL DS659	TL FAIL DS658		CHECK FAIL DS657
		KEY RLSE DS611		
PROGRAM DISPLAY	UPTL DS552	COMP DS551		POS 2 DS5_2
VERB NOUN	POS 4 DS4_4	POS 3 DS4_3		POS 2 DS4_2
REGISTER 1	± DS1_1	POS 5 DS1_5	POS 4 DS1_4	POS 3 DS1_3	POS 2 DS1_2	POS 1 DS1_1
REGISTER 2	± DS2_1	POS 5 DS2_5	POS 4 DS2_4	POS 3 DS2_3	POS 2 DS2_2	POS 1 DS2_1
REGISTER 3	± DS3_1	POS 5 DS3_5	POS 4 DS3_4	POS 3 DS3_3	POS 2 DS3_2	POS 1 DS3_1

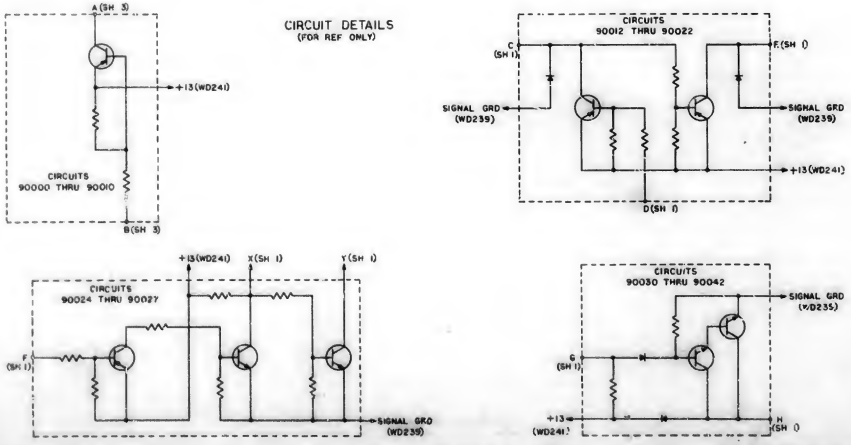
EXAMPLE OF LAMP CODING

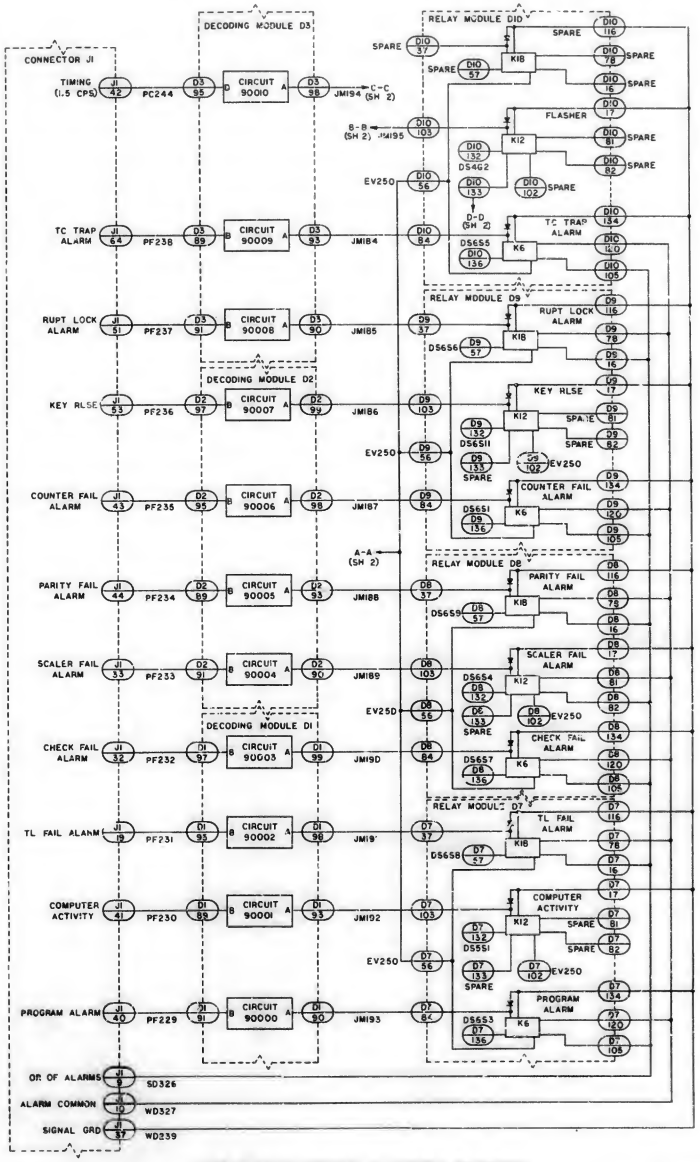
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	REF. SPEC.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES .X .XX .XXX	NASA	INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DO NOT SCALE THIS DRAWING MATERIAL	DRAWN		INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV
HEAT TREATMENT	CHECKED		
FINISH	APPROVED		
NEXT ASSY USED ON APPLICATION	NASA APPROVAL		SIZE J
	MIT APPROVAL		SCALE
	MIT APPROVAL		DWG NO. 1006167
			SHEET 2 OF 3

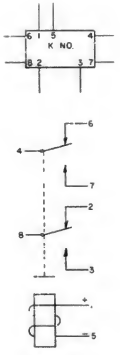


TYPE 'C' RELAY CONTACT NETWORK





TYPE 'A' RELAY CONTROL & CONTACT NETWORKS



NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINISH

NEXT ASSY USED ON

APPLICATION

MIT INSTRUMENTATION LAB Cambridge Mass

DRAWN

CHECKED

APPROVAL

APPROVAL

NAC APPROVAL

MIT APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV

CODE IDENT NO. J

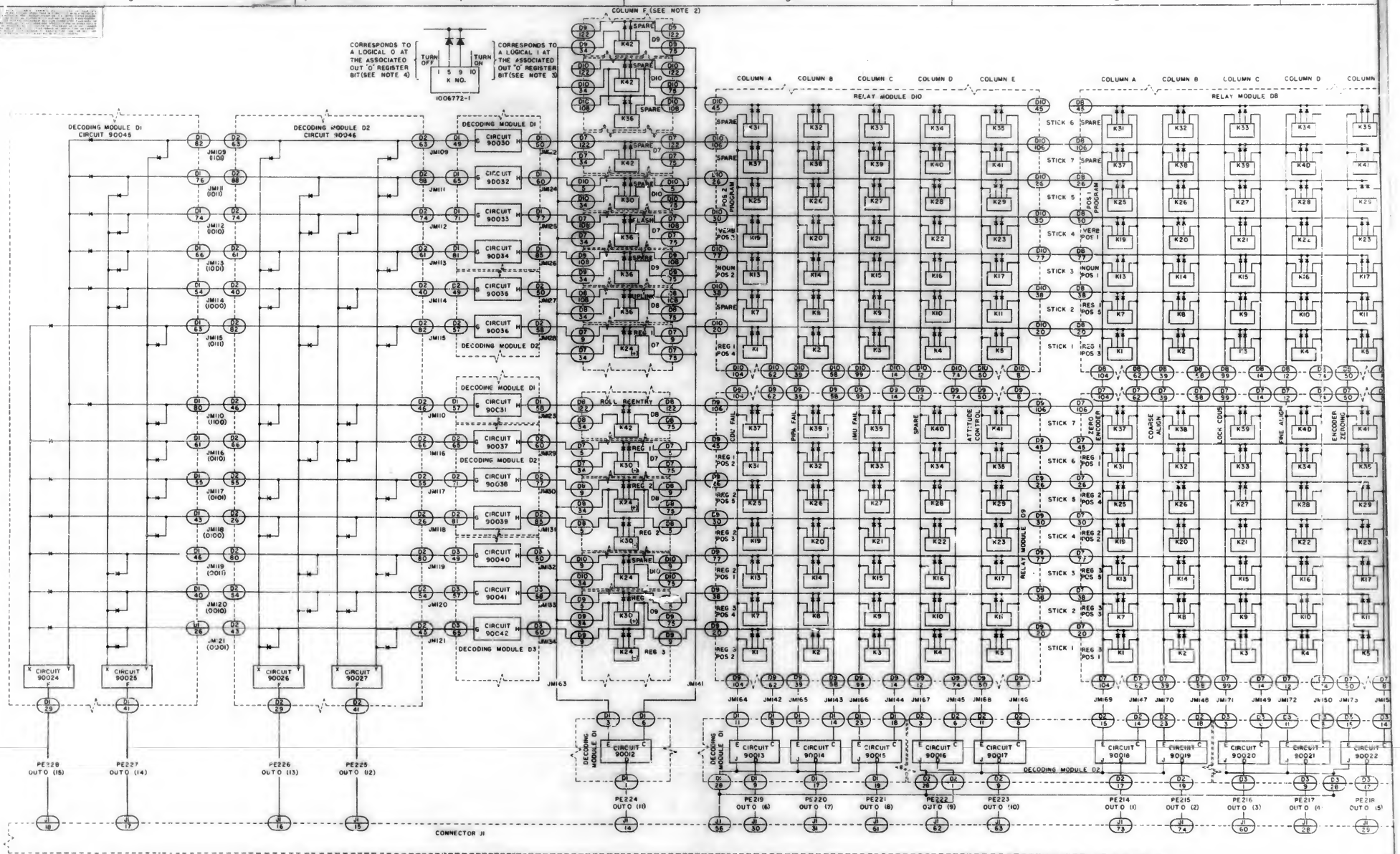
SIZE

NASA DRAWING NO. 1006167

SCALE

WT.

SHEET 3 OF



NOTES

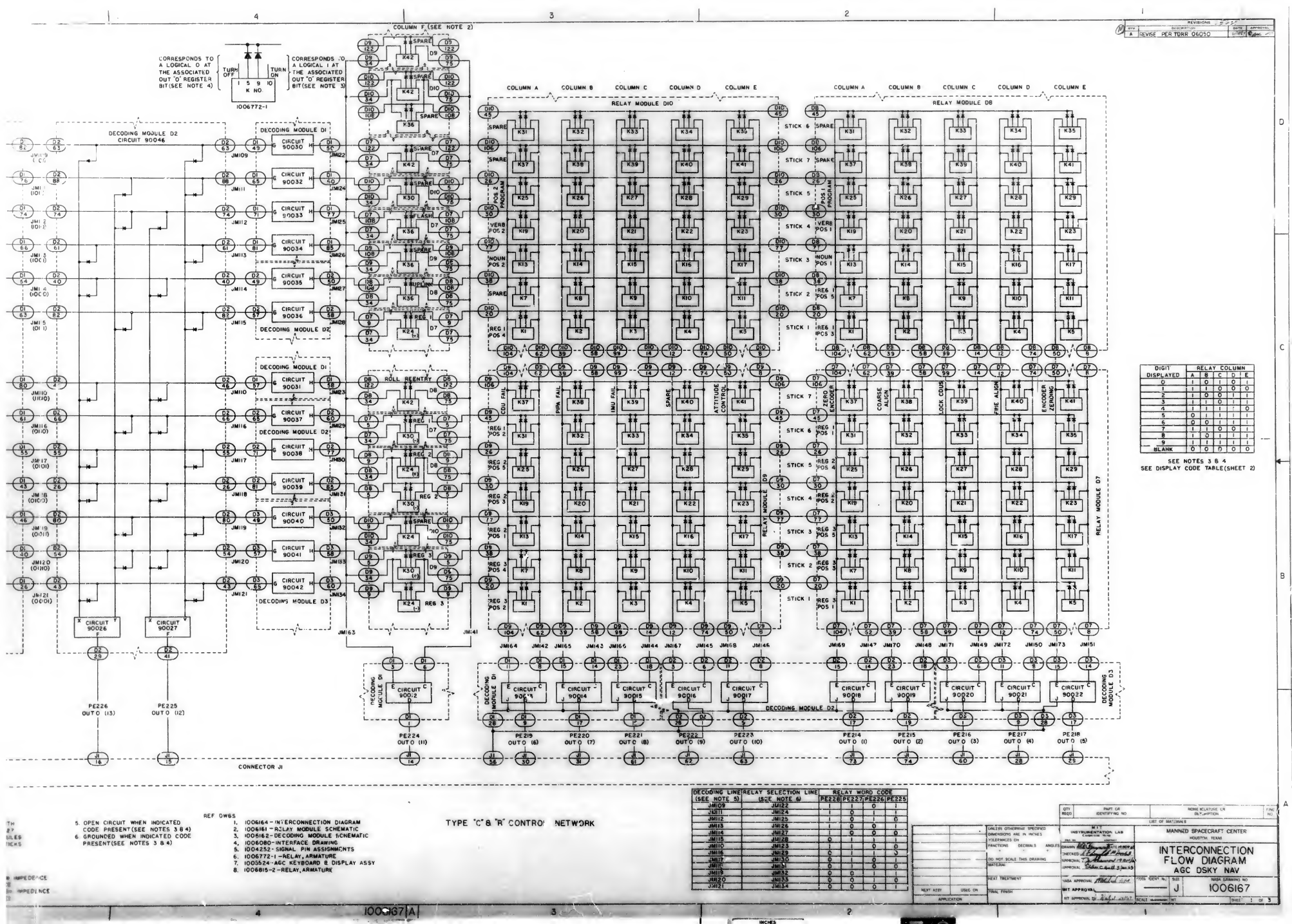
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS:
   K24 – STICK 4
   K30 – STICK 5
   K36 – STICK 6
   K42 – STICK 7
3. A LOGICAL '1' IN OUT O PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
4. A LOGICAL '0' IN OUT O PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE
5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS.

1. 1006164 – INTERCONNECTION DIAGRAM
2. 1006161 – RELAY MODULE SCHEMATIC
3. 1006162 – DECODING MODULE SCHEMATIC
4. 1006080-19 – TERFACE DRAWING
5. 1004252 – SIGNAL PIN ASSIGNMENTS
6. 1006772-1 – RELAY, ARMATURE
7. 1003524-AGC KEYBOARD & DISPLAY ASSY
8. 1006815-2 – RELAY, ARMATURE

TYPE "C" & "R" CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
JMI09	JMI22	1	1	0	1
JMI11	JMI24	1	0	1	1
JMI12	JMI25	1	0	1	0
JMI13	JMI26	1	0	0	1
JMI14	JMI27	1	0	0	0
JMI15	JMI28	0	1	1	1
JMI10	JMI23	1	1	1	0
JMI16	JMI29	0	1	1	0
JMI17	JMI30	0	1	0	1
JMI18	JMI31	0	1	0	0
JMI19	JMI32	0	0	1	1
JMI20	JMI33	0	0	1	0
JMI21	JMI34	0	0	0	1



DIGIT DISPLAYED	RELAY COLUMN				
	A	B	C	D	E
0	1	0	1	0	1
1	1	1	0	0	0
2	1	0	0	1	1
3	1	0	0	1	1
4	1	1	1	1	0
5	0	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE(SHEET 2)

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
JMI09	JMI22	1	1	0	1
JMI11	JMI24	1	0	1	0
JMI12	JMI25	1	0	1	1
JMI13	JMI26	1	0	0	1
JMI14	JMI27	1	0	0	0
JMI15	JMI28	0	1	1	1
JMI10	JMI23	0	1	1	0
JMI16	JMI29	0	1	0	1
JMI17	JMI30	0	1	0	0
JMI18	JMI31	0	0	1	1
JMI19	JMI32	0	0	1	0
JMI20	JMI33	0	0	0	1
JMI21	JMI34	0	0	0	0

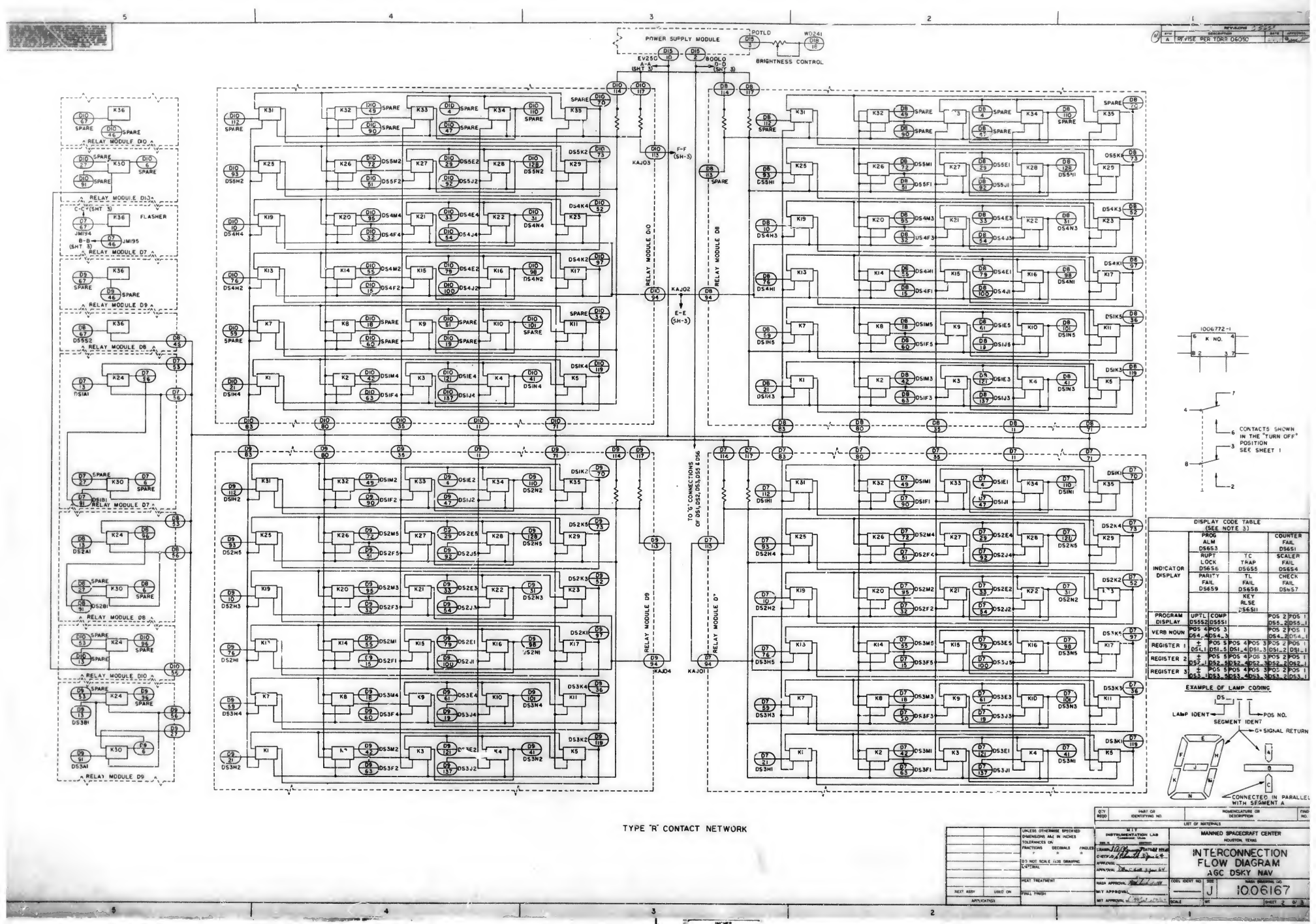
TYPE 'C' & 'R' CONTROL NETWORK

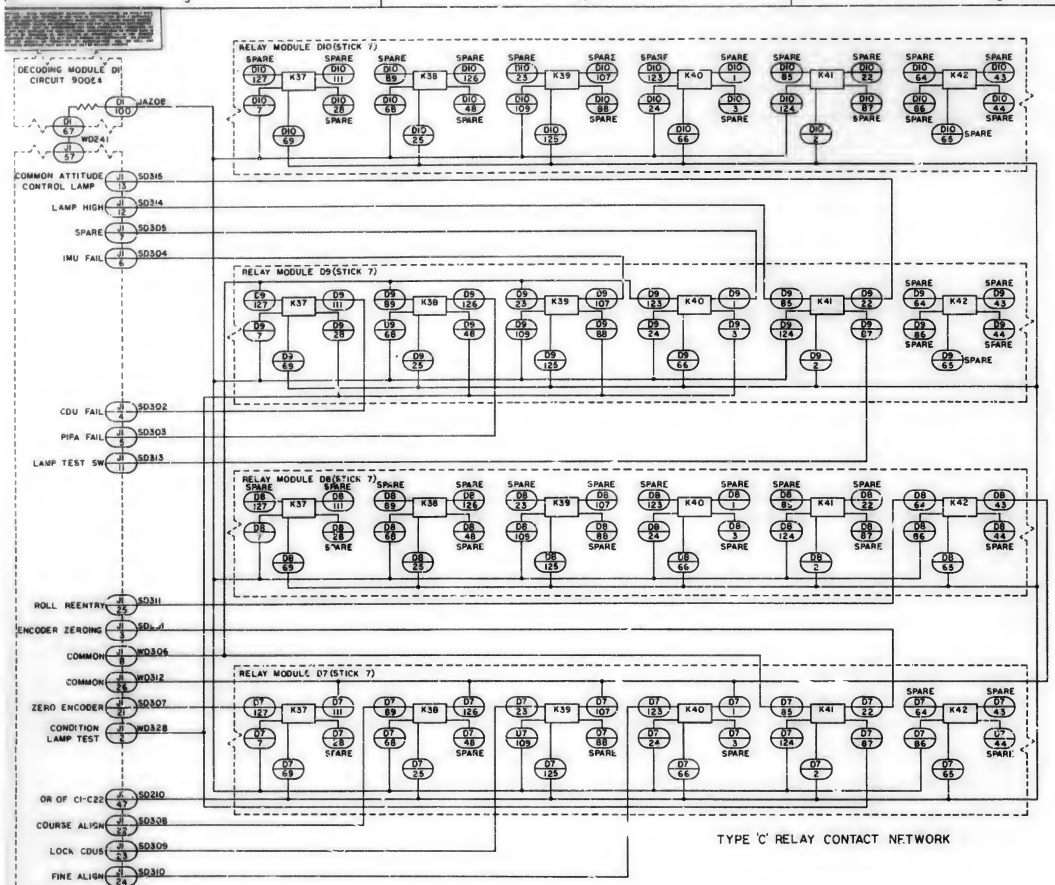
REF DWGS
1. 1006164 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006080 - INTERFACE DRAWING
5. 1004252 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1005524 - AGC KEYBOARD & DISPLAY ASSY
8. 1006815-2 - RELAY, ARMATURE

5. OPEN CIRCUIT WHEN INDICATED CODE PRESENT(SEE NOTES 3 & 4)
6. GROUNDED WHEN INDICATED CODE PRESENT(SEE NOTES 3 & 4)

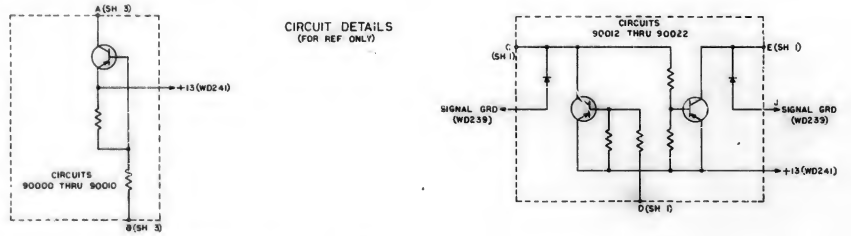
MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
INTERCONNECTION FLOW DIAGRAM
AGC DSKY NAV
SIZE J
1006167
SCALE
WT
SHEET 1 OF 3

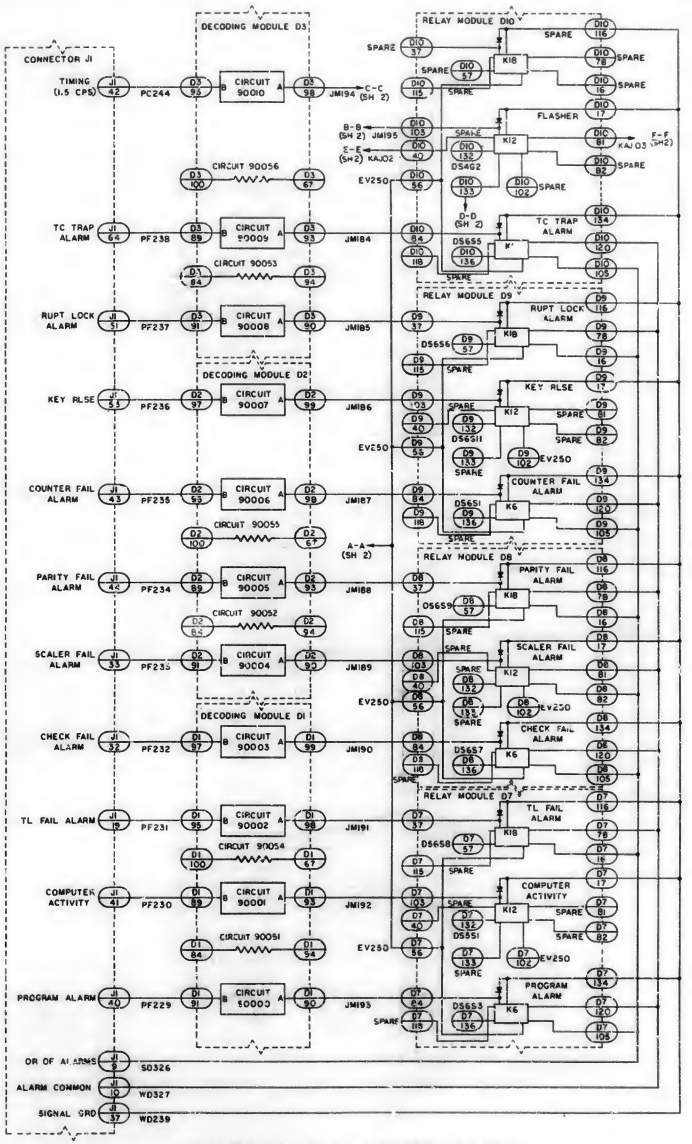
1006167 A


POWER SUPPLY MODULE
POTLD
WD241
BRIGHTNESS CONTROL
EV25G
BOOLO
RELAY MODULE D10
RELAY MODULE D13
RELAY MODULE D7
RELAY MODULE D9
RELAY MODULE D8 A
RELAY MODULE D7 A
RELAY MODULE D8
RELAY MODULE D10
RELAY MODULE D9
RELAY MODULE D0
RELAY MODULE D8
RELAY MODULE D9
RELAY MODULE D7
FLASHER
KAJO3
KAJO2
KAJO4
KAJO1
F-F (SH-3)
E-E (SH-3)
TO "G" CONNECTIONS OF DS1,DS2,DS3,DS5 & DS6
1006772-1
K NO.
CONTACTS SHOWN IN THE "TURN OFF" POSITION SEE SHEET 1
DISPLAY CODE TABLE (SEE NOTE 3)
INDICATOR DISPLAY
PROG ALM DS653
RUPT LOCK DS656
PARITY FAIL DS659
TC TRAP DS655
TL FAIL DS658
KEY RLSE DS651
COUNTER FAIL DS651
SCALER FAIL DS654
CHECK FAIL DS657
PROGRAM DISPLAY
VERB NOUN
REGISTER 1
REGISTER 2
REGISTER 3
EXAMPLE OF LAMP CODING
LAMP IDENT
POS NO.
SEGMENT IDENT
G=SIGNAL RETURN
CONNECTED IN PARALLEL WITH SEGMENT A
TYPE "R" CONTACT NETWORK
REVISE PER TORS 06050
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
INTERCONNECTION FLOW DIAGRAM
AGC DSKY NAV
1006167
SHEET 2 OF 3

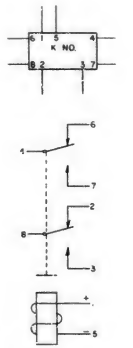


TYPE 'C' RELAY CONTACT NETWORK





TYPE 'A' RELAY CONTROL & CONTACT NETWORKS



NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISE PER TDRR 06080		

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ±, DECIMALS .X ±, .XX ±, ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
NEXT ASSY | USED ON
FINISH
APPLICATION

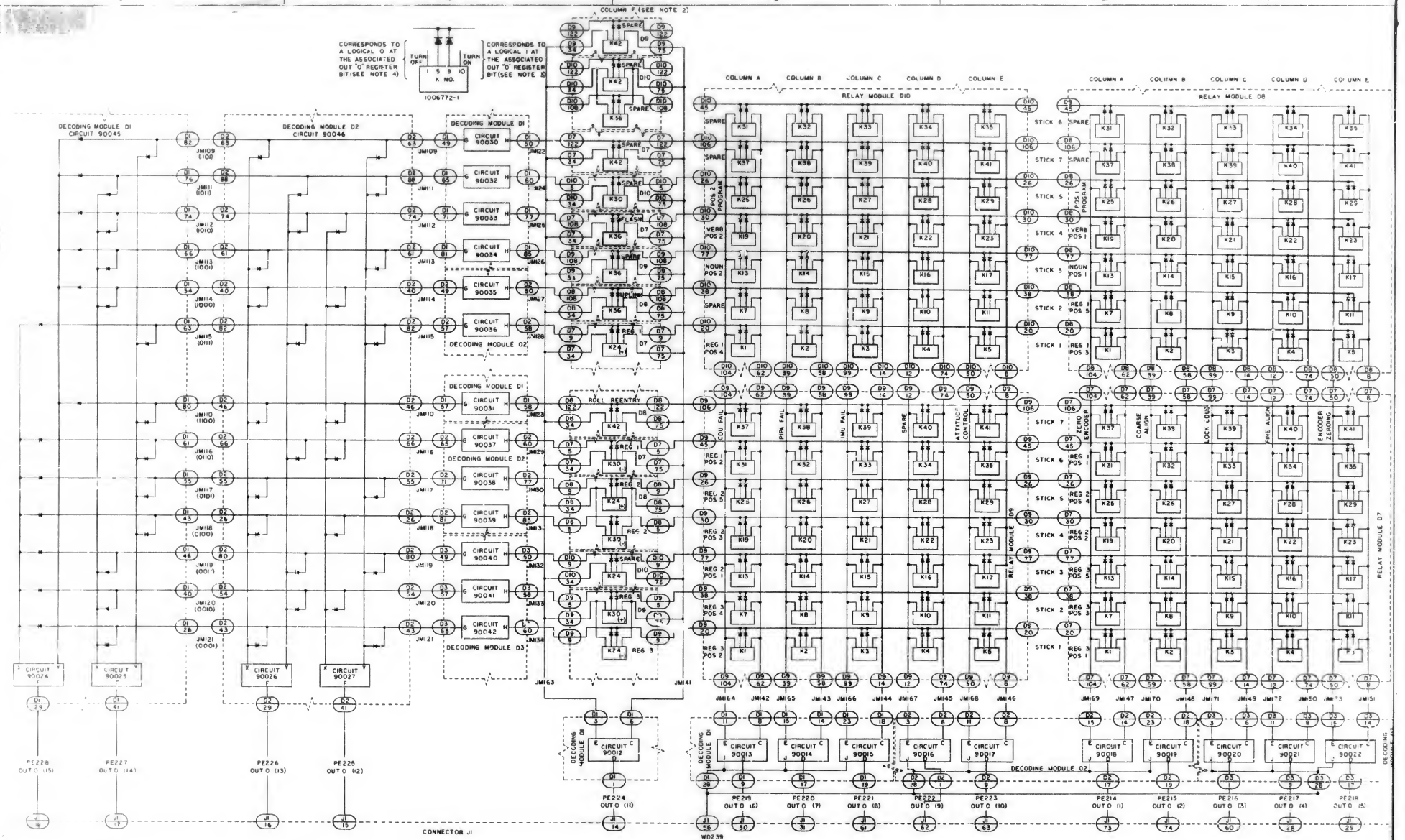
ITT INSTRUMENTATION LAB
Cambridge, Mass.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN [illegible] DATE 1/28/66
CHECKED [illegible]
ENGINEER [illegible]
APPROVED [illegible]
NASA APPROVAL [illegible]
ITT APPROVAL [illegible]

INTERCONNECTION FLOW DIAGRAM ASC DSKY NAV

CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1006167
WT | SHEET 3 OF 3



NOTES

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

COLUMN F RELAYS OF INDICATED MODULES TO BE LOCATED IN THE FOLLOWING STICKS
- K24 - STICK 4
- K30 - STICK 5
- K36 - STICK 6
- K42 - STICK 7

3 A LOGICAL '1' IN OUT O PROVIDES A LOW IMPEDENCE TO GROUND AT THE INDICATED INTERFACE

4 A LOGICAL '0' IN OUT O PROVIDES A HIGH IMPEDENCE TO GROUND AT THE INDICATED INTERFACE

5 OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

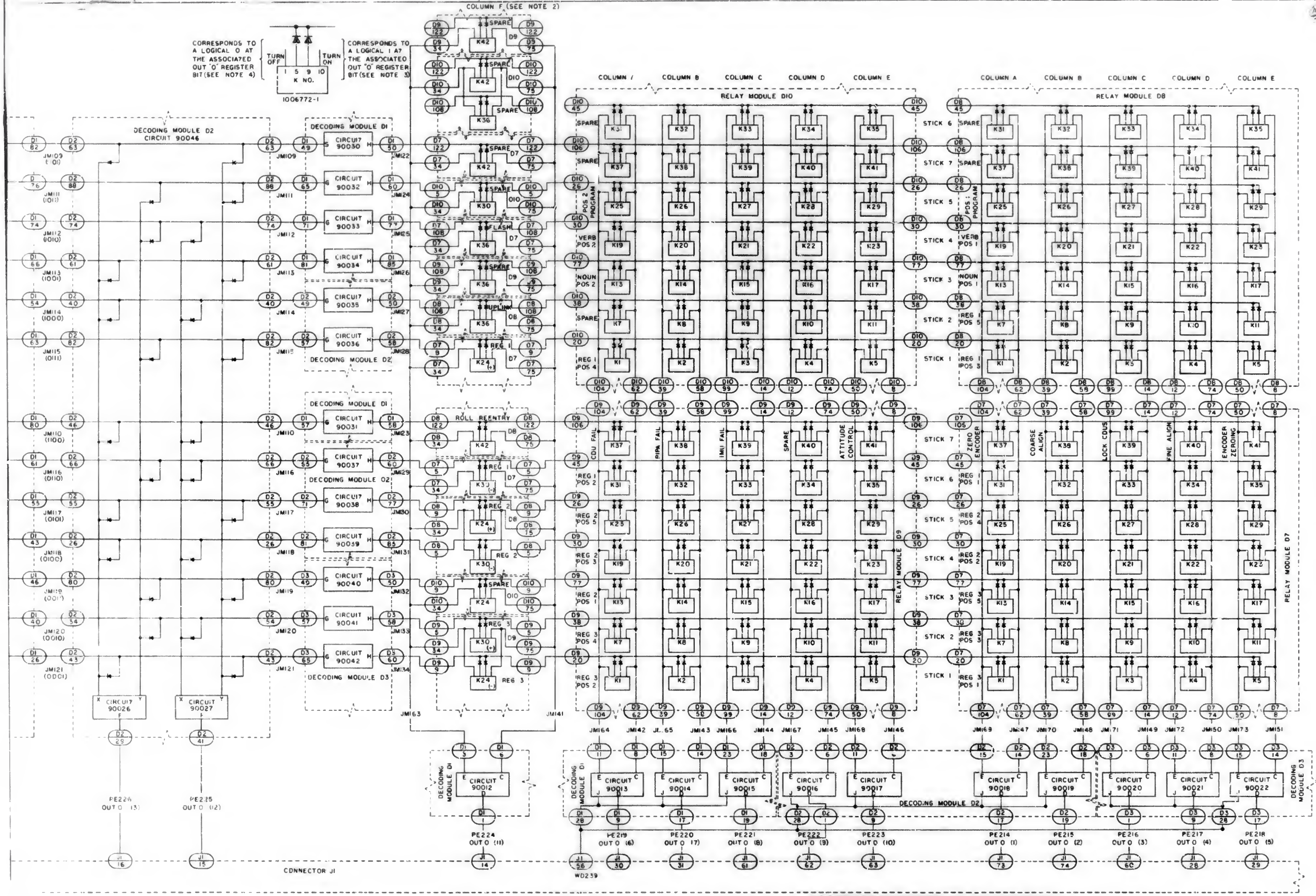
6. GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

REF DWGS
1. 1006164 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006080 - INTERFACE DRAWING
5. 1004252 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003924 - AGC KEYBOARD & DISPLAY ASSY
8. 1006815-2 - RELAY, ARMATURE

TYPE 'C' & 'R' CONTROL NETWORK

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE			
		PE228	PE227	PE226	PE225
JMI09	JMI22	1	1	0	1
JMI11	JMI24	1	0	1	1
JMI12	JMI25	1	0	1	0
JMI13	JMI26	1	0	0	1
JMI14	JMI27	1	0	0	0
JMI15	JMI28	0	1	1	1
JMI10	JMI23	1	1	0	0
JMI16	JMI29	0	1	1	0
JMI17	JMI30	0	1	0	1
JMI18	JMI31	0	1	0	0
JMI19	JMI32	0	0	1	1
JMI20	JMI33	0	0	1	0
JMI21	JMI34	0	0	0	1

A	REVISE PER TDRR 06050	
B	CHANGED PER TDRR 07070 DR. [illegible]	



DIGIT DISPLAYED	RELAY COLUMN A	B	C	D	E
0	1	0	1	0	1
1	1	1	0	0	0
2	1	0	0	1	1
3	1	1	0	1	1
4	1	1	1	1	0
5	0	1	1	1	1
6	0	0	1	1	1
7	1	1	0	0	1
8	1	0	1	1	1
9	1	1	1	1	1
BLANK	0	0	0	0	0

SEE NOTES 3 & 4
SEE DISPLAY CODE TABLE (SHEET 2)

DECODING LINE (SEE NOTE 5)	RELAY SELECTION LINE (SEE NOTE 6)	RELAY WORD CODE PE228	PE227	PE226	PE225
JM109	JM122	1	1	0	1
JM111	JM124	1	0	1	1
JM112	JM125	1	0	1	0
JM113	JM126	1	0	0	1
JM114	JM127	1	0	0	0
JM115	JM128	0	1	1	1
JM110	JM123	1	1	0	0
JM116	JM129	0	1	1	0
JM117	JM130	0	1	0	1
JM118	JM131	0	1	0	0
JM119	JM132	0	0	1	1
JM120	JM133	0	0	1	0
JM121	JM134	0	0	0	1

TYPE "C" & "R" CONTROL NETWORK

...ITH
...B27
...CUI ES
...TICKS

5 OPEN CIRCUIT WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)
6 GROUNDED WHEN INDICATED CODE PRESENT (SEE NOTES 3 & 4)

...W IMPEDENCE
...CE
...GH IMPEDENCE
...CE

REF DWGS
1. 1006164 - INTERCONNECTION DIAGRAM
2. 1006161 - RELAY MODULE SCHEMATIC
3. 1006162 - DECODING MODULE SCHEMATIC
4. 1006080 - INTERFACE DRAWING
5. 1004252 - SIGNAL PIN ASSIGNMENTS
6. 1006772-1 - RELAY, ARMATURE
7. 1003524 - AGC KEYBOARD & DISPLAY ASSY
8. 1006615-2 - RELAY, ARMATURE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY / USED ON
APPLICATION

QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION
LIST OF MATERIALS

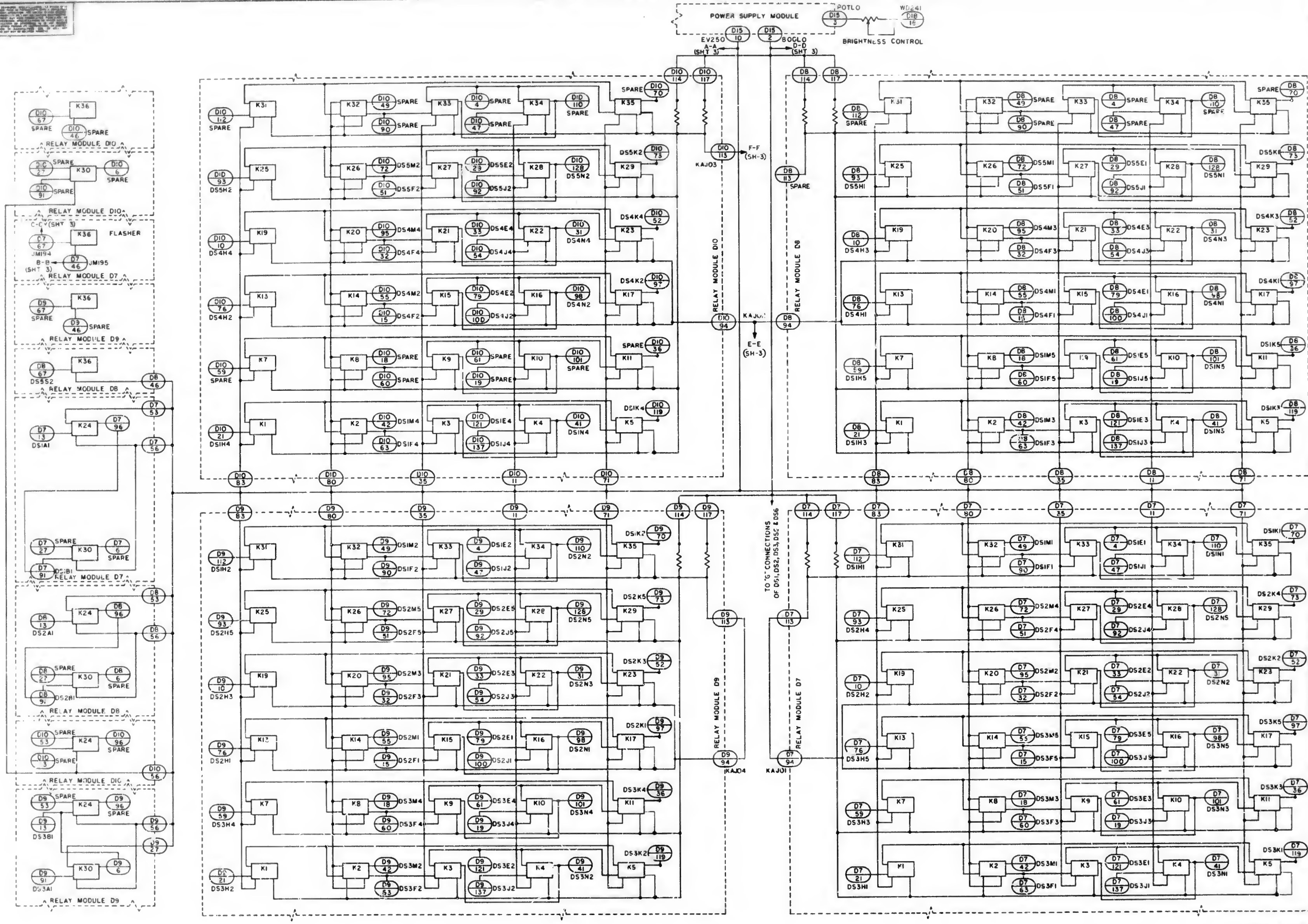
M I T INSTRUMENTATION LAB
DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

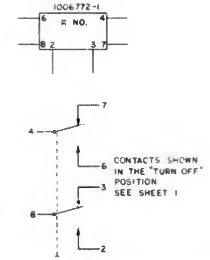
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV

CODE IDENT NO —— SIZE J NASA DRAWING NO 1006167
SCALE —— SHEET 1 OF 3

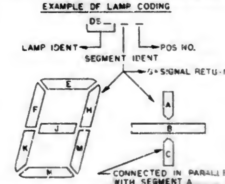
REV	DESCRIPTION	DATE	APPROVED
A	REVISE PER TDRR 06050		
B	CHANGED PER TDRR 07670		





DISPLAY CODE TABLE (SEE NOTE 3)						
INDICATOR DISPLAY	PROG ALM DS653				COUNTER FAIL DS651	
	RUPT LOCK DS656		TC TRAP DS655		SCALER FAIL DS654	
	PARITY FAIL DS659		TL FAIL DS658		CHECK FAIL DS657	
			KEY RLSE DS6511			
PROGRAM DISPLAY	UPTL DS552	COMP DS551			POS 2 DS5_2	POS 1 DS5_1
VERB NOUN	POS 4 DS4_4	POS 3 DS4_3			POS 2 DS4_2	POS 1 DS4_1
REGISTER 1	± DS1_1	POS 5 DS1_5	POS 4 DS1_4	POS 3 DS1_3	POS 2 DS1_2	POS 1 DS1_1
REGISTER 2	± DS2_1	POS 5 DS2_5	POS 4 DS2_4	POS 3 DS2_3	POS 2 DS2_2	POS 1 DS2_1
REGISTER 3	± DS3_1	POS 5 DS3_5	POS 4 DS3_4	POS 3 DS3_3	POS 2 DS3_2	POS 1 DS3_1

EXAMPLE OF LAMP CODING



TYPE "R" CONTACT NETWORK

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION
LIST OF MATERIALS		

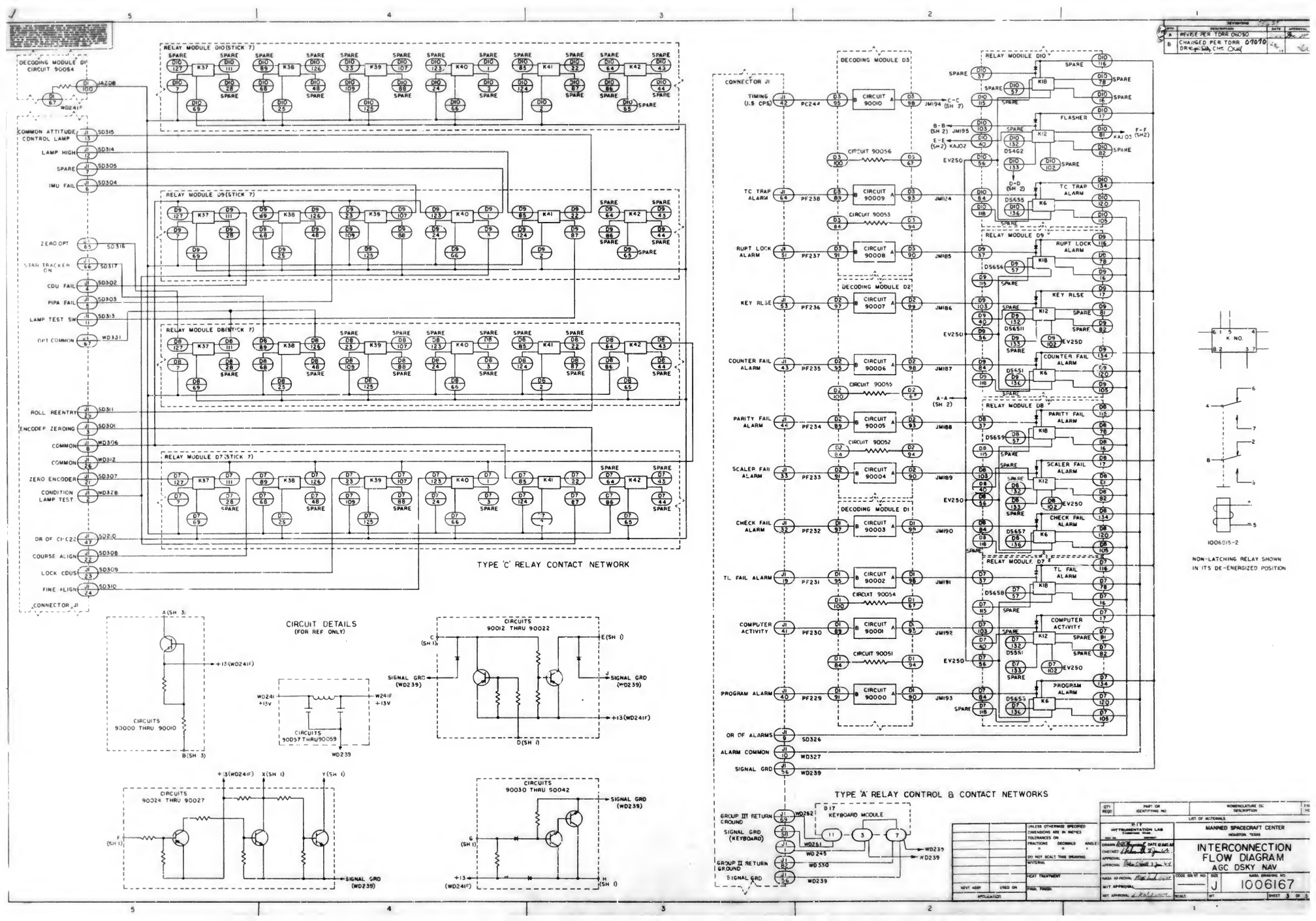
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS
DRAWN / CHECKED / APPROVAL / APPROVAL
NASA APPROVAL
MIT APPROVAL
MIT APPROVAL

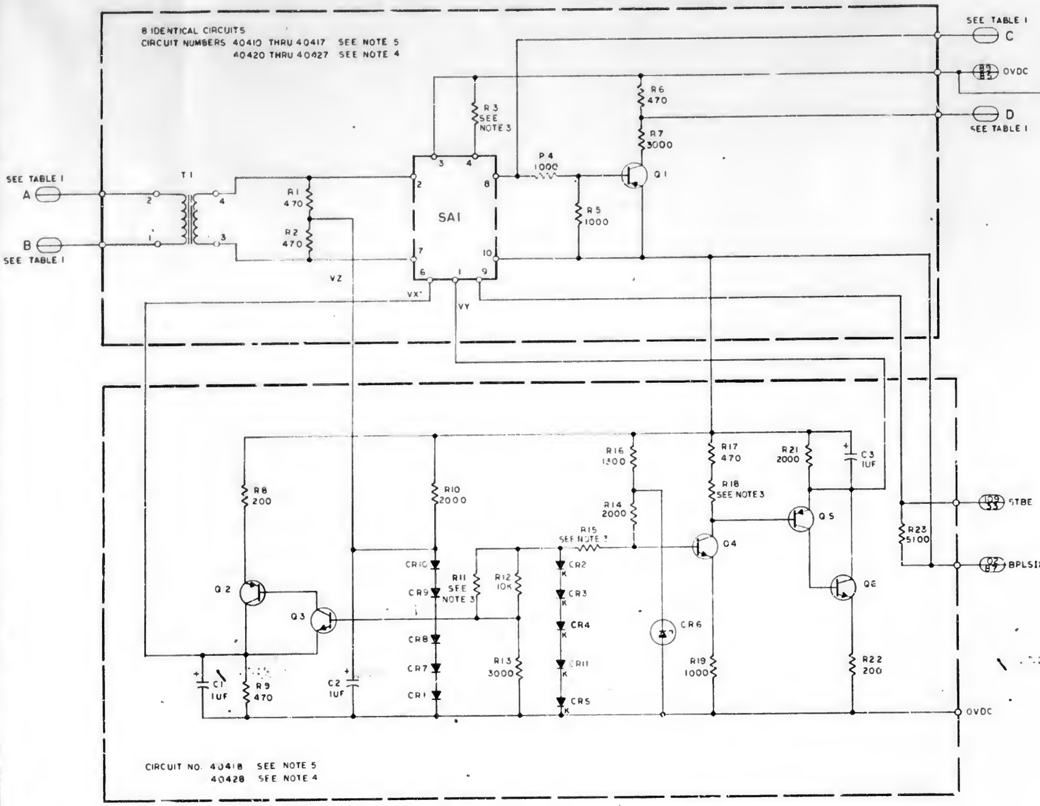
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV

SIZE J | NASA DRAWING NO. 10.06167
SCALE | WT | SHEET 2 OF


DECODING MODULE D1 CIRCUIT 90054
RELAY MODULE D10(STICK 7)
RELAY MODULE D9(STICK 7)
RELAY MODULE D8(STICK 7)
RELAY MODULE D7(STICK 7)
COMMON ATTITUDE CONTROL LAMP
LAMP HIGH
SPARE
IMU FAIL
ZERO OPT
STAR TRACKER ON
CDU FAIL
PIPA FAIL
LAMP TEST SW
OPT COMMON
ROLL REENTRY
ENCODER ZEROING
COMMON
COMMON
ZERO ENCODER
CONDITION LAMP TEST
OR OF CI-C22
COURSE ALIGN
LOCK CDUS
FINE ALIGN
CONNECTOR J1
TYPE 'C' RELAY CONTACT NETWORK
CIRCUIT DETAILS (FOR REF ONLY)
CIRCUITS 90000 THRU 90010
CIRCUITS 90012 THRU 90022
CIRCUITS 90057 THRU 90059
CIRCUITS 90024 THRU 90027
CIRCUITS 90030 THRU 90042
DECODING MODULE D3
DECODING MODULE D2
DECODING MODULE D1
RELAY MODULE D10
RELAY MODULE D9
RELAY MODULE D8
RELAY MODULE D7
CONNECTOR J1
TIMING (1.5 CPS)
TC TRAP ALARM
RUPT LOCK ALARM
KEY RLSE
COUNTER FAIL ALARM
PARITY FAIL ALARM
SCALER FAIL ALARM
CHECK FAIL ALARM
TL FAIL ALARM
COMPUTER ACTIVITY
PROGRAM ALARM
FLASHER
OR OF ALARMS
ALARM COMMON
SIGNAL GRD
TYPE 'A' RELAY CONTROL & CONTACT NETWORKS
D17 KEYBOARD MODULE
GROUP III RETURN GROUND
SIGNAL GRD (KEYBOARD)
GROUP II RETURN GROUND
SIGNAL GRD
1006815-2
NON-LATCHING RELAY SHOWN IN ITS DE-ENERGIZED POSITION
REVISIONS
A REVISE PER TDRR 07070
B CHANGED PER TDRR 07070
INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER HOUSTON, TEXAS
INTERCONNECTION FLOW DIAGRAM AGC DSKY NAV
1006167

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11773 DR — CHK —		



REF DES	PART NO.	DESCRIPTION	VALUE	TOL	RATING	CKT NO. USED ON
R1	1006750 -24	RESISTOR	470	2%	1/4 W	
R2	-24		470			
R3	-		SEE NOTE 3			40410 THRU 40417
R4	-32		1000			
R5	-32		1000			40420 THRU 40427
R6	-24		470			
R7	43		3000			
R8	-15		200			40418 40428
R9	-24		470			
R10	-39		2000			
R11	-		SEE NOTE 3			
R12	-56		10K			
R13	-43		3300			
R14	-39		2000			
R15	-		SEE NOTE 3			
R16	-35		1300			
R17	-24		470			
R18			SEE NOTE 3			
R19	-32		1000			
~~R20~~	-					
R21	-39		2000			
R22	-15		200			
R23	-49		5100			
C1	1006755-69	CAPACITOR	1 UF		35V	
C2						
C3						
CR1	1006751	DIODE				
CR2						
CR3	-					
CR4						
CR5						
CR6	1006838					
CR7	1006751					
CR8						
CR9						
CR10						
CR11						
Q1	1006753	TRANSISTOR				40410 THRU 40417
Q2	1006753					40418 , 40428
Q3	1006752					
Q4	1006752					
Q5	1006753					
Q6	1006752					
T1	1006762	TRANSFORMER				40410 THRU 40417
SA1	1006769	SENSE AMPL				40420 THRU 40427

40420 THRU 40427

R3	
PART NO	VALUE
1006750-15	200
-16	220
-17	240
-18	270
-19	300
-20	330
-21	360
-22	390
-23	430
-24	470
-25	510
-26	560
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-33	1100
-34	1200
-35	1300
-36	1500
-37	1600
-38	1800
-39	2000
-40	2200
-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
1006750-49	5100

TABLE III

R15		R18	
PART NO.	VALUE	PART NO	VALUE
1006750 - 1	51	1006750 - 25	510
- 2	56	- 26	560
- 3	62	- 27	620
- 4	68	- 28	680
- 5	75	- 29	750
- 6	82	- 30	820
- 7	91	- 31	910
- 8	100	- 32	1000
- 9	110	- 33	1100
- 10	120	- 34	1200
- 11	130	- 35	1300
- 12	150	- 36	1500
- 13	160	- 37	1600
- 14	180	- 38	1800
- 15	200	- 39	2000
- 16	220	- 40	2200
- 17	240	- 41	2400
- 19	270	- 42	2700
- 19	300	- 43	3000
- 20	330	- 44	3300
- 21	360	- 45	3600
- 22	390	- 46	3900
- 23	430	- 47	4300
- 24	470	- 48	4700
1006750 - 25	510	1006750 - 49	5100

TABLE II

R11		R11	
PART NO.	VALUE	PART NO.	VALUE
1006750-15	200	1006750-31	910
-16	220	-32	1000
-17	240	-33	1100
-16	270	-34	1200
-19	300	-35	1300
-20	330	-36	1500
-21	360	-37	1600
-22	390	-38	1800
-23	430	-39	2000
-24	470	-40	2200
-25	510	-41	2400
-26	560	-42	2700
-27	620	-43	3000
-28	680	-44	3300
-29	750	-45	3600
1006750-30	820	1006750-46	3900

TABLE I

COMPONENT PREFIX NO. (ASSY)	CIRCUIT NO.	A			B			C			D		
		SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5
1	40410	SAF01	90	8	SBF01	100	6	40410A	80	2	SA01	110	4
2	40411	SAF02	91	7	SBF02	101	9	40411A	81	13	SA02	111	11
3	40412	SAF03	92	24	SBF03	102	22	40412A	82	18	SA03	112	20
4	40413	SAF04	93	23	SBF04	103	25	40413A	83	29	SA04	113	27
5	40414	SAF05	94	62	SBF05	104	60	40414A	84	54	SA05	114	56
6	40415	SAF06	95	61	SBF06	105	63	40415A	85	67	SA06	115	65
7	40416	SAF07	96	78	SBF07	106	76	40416A	86	70	SA07	116	72
8	40417	SAF08	97	77	SBF08	107	79	40417A	87	83	SA08	117	81
1	40420	SAF09	90	8	SBF09	100	6	40420A	80	2	SA09	110	4
2	40421	SAF10	91	7	SBF10	101	9	40421A	81	13	SA10	111	11
3	40422	SAF11	92	24	SBF11	102	22	40422A	82	18	SA11	112	20
4	40423	SAF12	93	23	SBF12	103	25	40423A	83	29	SA12	113	27
5	40424	SAF13	94	62	SBF13	104	60	40424A	84	54	SA13	114	56
6	40425	SAF14	95	61	SBF14	105	63	40425A	85	67	SA14	115	65
7	40426	SAF15	96	78	SBF15	106	76	40426A	86	70	SA15	116	72
8	40427	SAF16	97	77	SBF16	107	79	40427A	87	83	SA16	117	81

REF DWG 1003463 ERASABLE SENSE AMPL MODULE ASSY

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. UNLESS OTHERWISE SPECIFIED, RESISTOR VALUES ARE IN OHMS CAPACITOR VALUES ARE IN MICROFARADS
3. THE VALUE OF R3, R11, R15, R18 TO BE DETERMINED BY ELECTRICAL TEST. SEE TABLES II AND III
4. CIRCUIT NO 40420 THRU 40427 AND 40428 TO BE IN MODULE B14
5. CIRCUIT NO. 40410 THRU 40417 AND 40418 TO BE IN MODULE B13

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

NEXT ASSY | USED ON

APPLICATION

MIT INSTRUMENTATION LAB

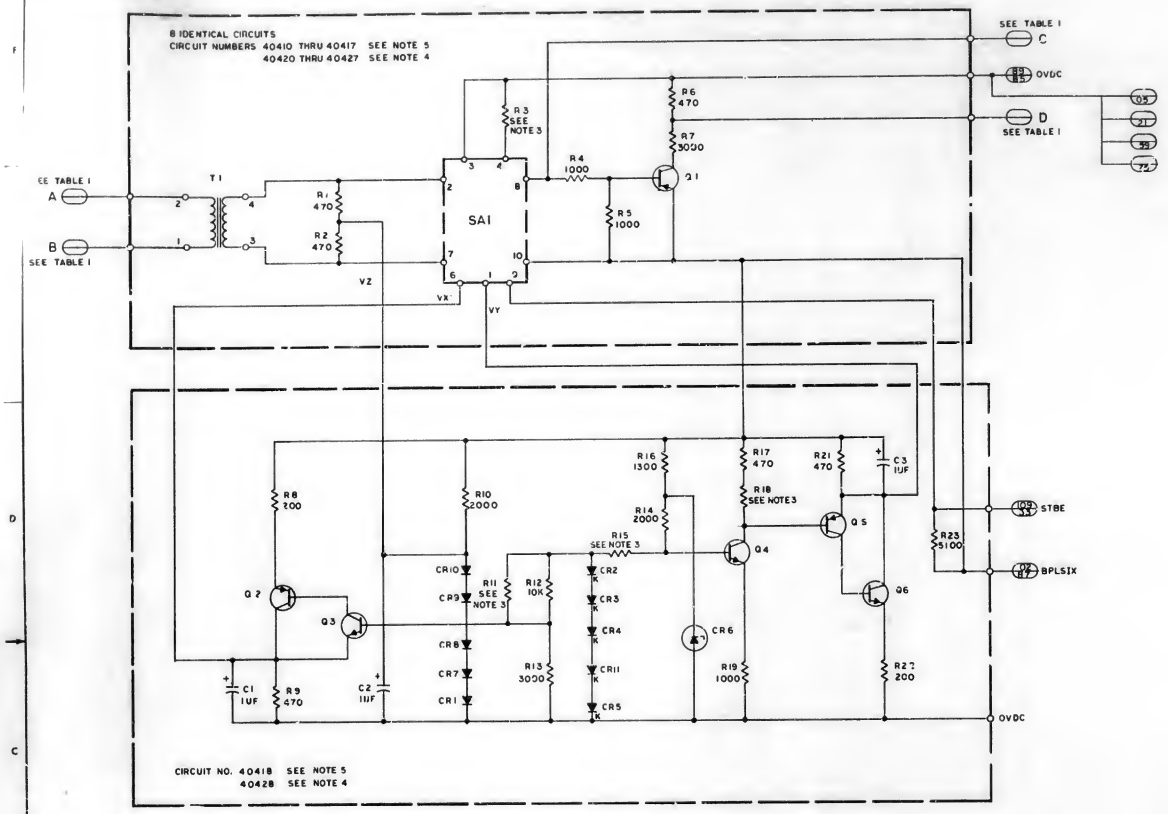
DRAWN — CHECKED — APPROVAL — APPROVAL — NASA APPROVAL —

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

SCHEMATIC, ERASABLE SENSE AMPL MODULE B13-B14

CODE IDENT NO — | SIZE E | NASA DRAWING NO 1006187

SHEET 1 OF 1



REF DES	PART NO.	DESCRIPTION	VALUE	TOL	RATING	CKT NO. USED ON
R1	1006750-24	RESISTOR	470	2%	1/4 W	
R2	-24		470			
R3	-		SEE NOTE 3			40410 THRU 40417
R4	-32		1000			
R5	-32		1000			40420 THRU 40427
R6	-24		470			
R7	-43		3000			
R8	-15		200			40418 40428
R9	-24		470			
R10	-39		2000			
R11	-		SEE NOTE 3			
R12	-36		10K			
R13	-43		3000			
R14	-39		2000			
R15	-		SEE NOTE 3			
R16	-35		1300			
R17	-24		470			
R18	-		SEE NOTE 3			
R19	-32		1000			
~~R20~~	-		-			
R21	-24		470			
R22	-15		200			
R23	-49		5100			
C1	1006755-69	CAPACITOR	1 UF		35 V	
C2						
C3						
CR1	1006751	DIODE				
CR2						
CR3						
CR4						
CR5						
CR6	1006838					
CR7	1006731					
CR8						
CR9						
CR10						
CR11						
40420 THRU 40427 Q1	1006753	TRANSISTOR				40410 THRU 40417
Q2	1006753					40418 , 40428
Q3	1006752					
Q4	1006752					
Q5	1006753					
Q6	1006752					
T1	1006762	TRANSFORMER				40410 THRU 40417
						40420 THRU 40427
SA1	1006769	SENSE AMPL.				

TABLE II

R11		R11	
PART NO.	VALUE	PART NO.	VALUE
1006750-15	200	1006750-31	910
-16	220	-32	1000
-17	240	-33	1100
-18	270	-34	1200
-19	300	-35	1300
-20	330	-36	1500
-21	360	-37	1600
-22	390	-38	1800
-23	430	-39	2000
-24	470	-40	2200
-25	510	-41	2400
-26	560	-42	2700
-27	620	-43	3000
-28	680	-44	3300
-29	750	-45	3600
1006750-30	820	1006750-46	3900

TABLE III

R13		R15		R18	
PART NO.	VALUE	PART NO.	VALUE	PART NO.	VALUE
1006750-25	510	1006750-1	51	1006750-32	1000
-26	560	-2	56	-33	1100
-27	620	-3	62	-34	1200
-28	680	-4	68	-35	1300
-29	750	-5	75	-36	1500
-30	820	-6	82	-37	1600
-31	910	-7	91	-38	1800
-32	1000	-8	100	-39	2000
-33	1100	-9	110	-40	2200
-34	1200	-10	120	-41	2400
-35	1300	-11	130	-42	2700
-36	1500	-12	150	-43	3000
-37	1600	-13	160	-44	3300
-38	1800	-14	180	-45	3600
-39	2000	-15	200	-46	3900
-40	2200	-16	220	-47	4300
-41	2400	-17	240	-48	4700
-42	2700	-18	270	1006750-49	5100
-43	3000	-19	300		
-44	3300	-20	330		
-45	3600	-21	360		
-46	3900	-22	390		
-47	4300	-23	430		
-48	4700	-24	470		
1006750-49	5100	1006750-25	510		

TABLE I

COMPONENT PREFIX NO. (ASSY)	CIRCUIT NO.	A			B			C			D		
		SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5	SIGNAL	PIN NO. AGC 4	PIN NO. AGC 5
1	40410	SAF01	90	8	SBF01	100	6	40410A	80	2	SA01	110	4
2	40411	SAF02	91	7	SBF02	101	9	40411A	81	13	SA02	111	11
3	40412	SAF03	92	24	SBF03	102	22	40412A	82	18	SA03	112	20
4	40413	SAF04	93	23	SBF04	103	25	40413A	83	29	SA04	113	27
5	40414	SAF05	94	62	SBF05	104	60	40414A	84	54	SA05	114	56
6	40415	SAF06	95	61	SBF06	105	63	40415A	85	67	SA06	115	65
7	40416	SAF07	96	78	SBF07	106	76	40416A	86	70	SA07	116	72
8	40417	SAF08	97	77	SBF08	107	79	40417A	87	83	SA08	117	81
1	40420	SAF05	90	8	SBF09	100	6	40420A	80	2	SA09	110	4
2	40421	SAF1C	91	7	SBF10	101	9	40421A	81	13	SA10	111	11
3	40422	SAF11	92	24	SBF11	102	22	40422A	82	18	SA11	112	20
4	40423	SAF12	93	23	SBF12	103	25	40423A	83	29	SA12	113	27
5	40424	SAF13	94	62	SBF13	104	60	40424A	84	54	SA13	114	56
6	40425	SAF14	95	61	SBF14	105	63	40425A	85	67	SA14	115	65
7	40426	SAF15	96	78	SBF15	106	76	40426A	86	70	SA15	116	72
8	40427	SAF16	97	77	SBF16	107	79	40427A	87	83	SA16	117	81

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. UNLESS OTHERWISE SPECIFIED, RESISTOR VALUES ARE IN OHMS CAPACITOR VALUES ARE IN MICROFARADS
3. THE VALUE OF R3,R11,R15,R18 TO BE DETERMINED BY ELECTRICAL TEST. SEE TABLES II AND III
4. CIRCUIT NO. 40420 THRU 40427 AND 40428 TO BE IN MODULE B14
5. CIRCUIT NO. 40410 THRU 40417 AND 40418 TO BE IN MODULE B13

REF DWG 1003463 ERASABLE SENSE AMPL. MODULE ASSY

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

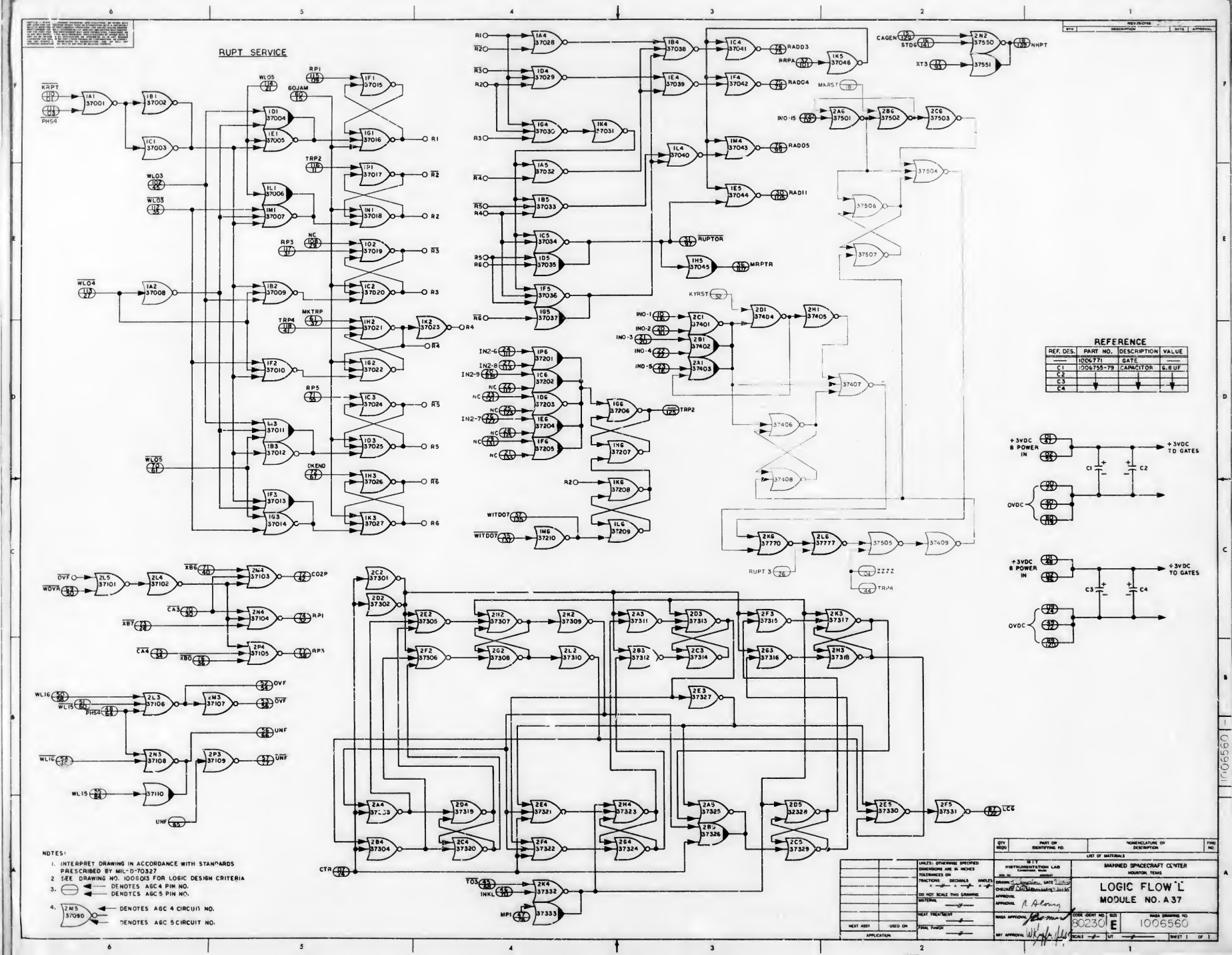
DRAWN
CHECKED
APPROVED
APPROVED
NASA APPROVED
NOT APPLICABLE

SCHEMATIC, ERASABLE SENSE AMPL MODULE B13-B14

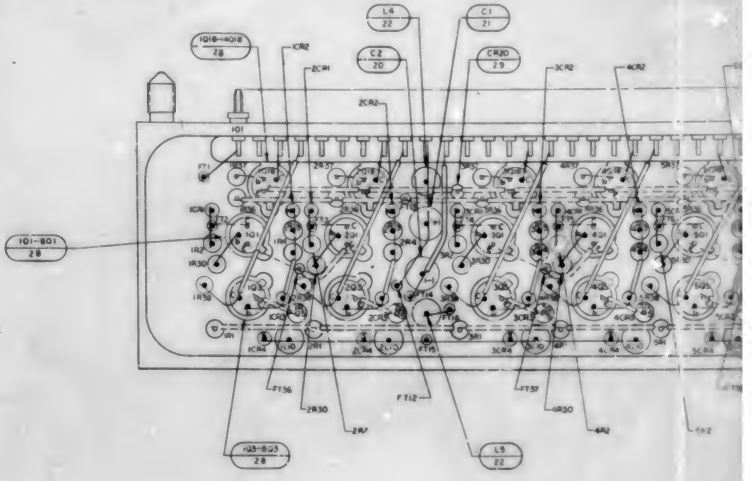
CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1006187

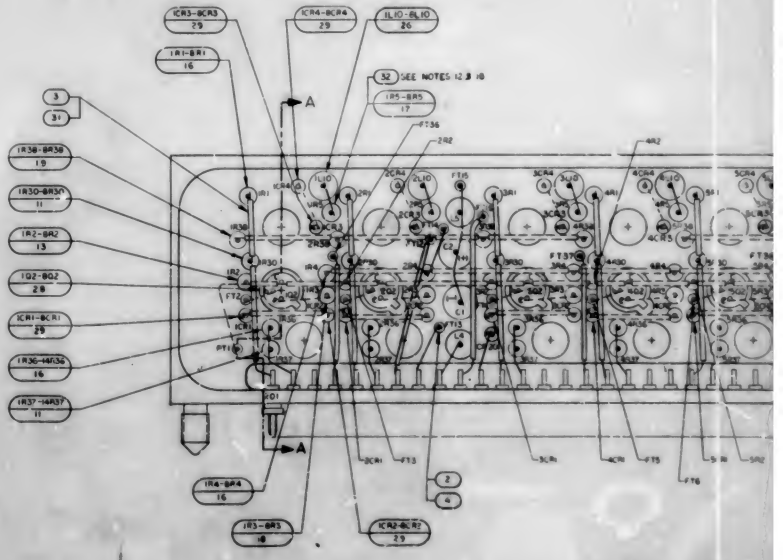
SCALE — WT — SHEET 1 OF 3

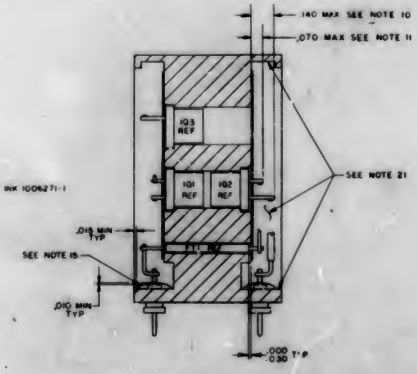
1006187


RUPT SERVICE
REFERENCE
REF. DES. | PART NO. | DESCRIPTION | VALUE
C1 | 1006771 | GATE | —
C2 | 1006755-79 | CAPACITOR | 6.8 UF
C3
C4
+3VDC B POWER IN
+3VDC TO GATES
OVDC
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. SEE DRAWING NO. 1005013 FOR LOGIC DESIGN CRITERIA
3. DENOTES AGC 4 PIN NO.
DENOTES AGC 5 PIN NO.
4. DENOTES AGC 4 CIRCUIT NO.
DENOTES AGC 5 CIRCUIT NO.
MASSACHUSETTS INSTITUTE OF TECHNOLOGY INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER HOUSTON, TEXAS
LOGIC FLOW "L"
MODULE NO. A37
80230
E
1006560
SCALE
SHEET 1 OF 1

R5, R18, R29	
PART NO	VALUE (OHMS)
1006788-118	1.69
-119	1.72
-120	1.74
-121	1.76
-122	1.78
-123	1.80
-124	1.82
-125	1.84
-126	1.87
-127	1.89
-128	1.91
-129	1.93
-130	1.96
-131	1.98
-132	2.00
-133	2.03
-134	2.05
-135	2.08
-136	2.10
-137	2.13
-138	2.15
-139	2.18
-140	2.21
-141	2.23
-142	2.26
-143	2.29
1006788-144	2.32

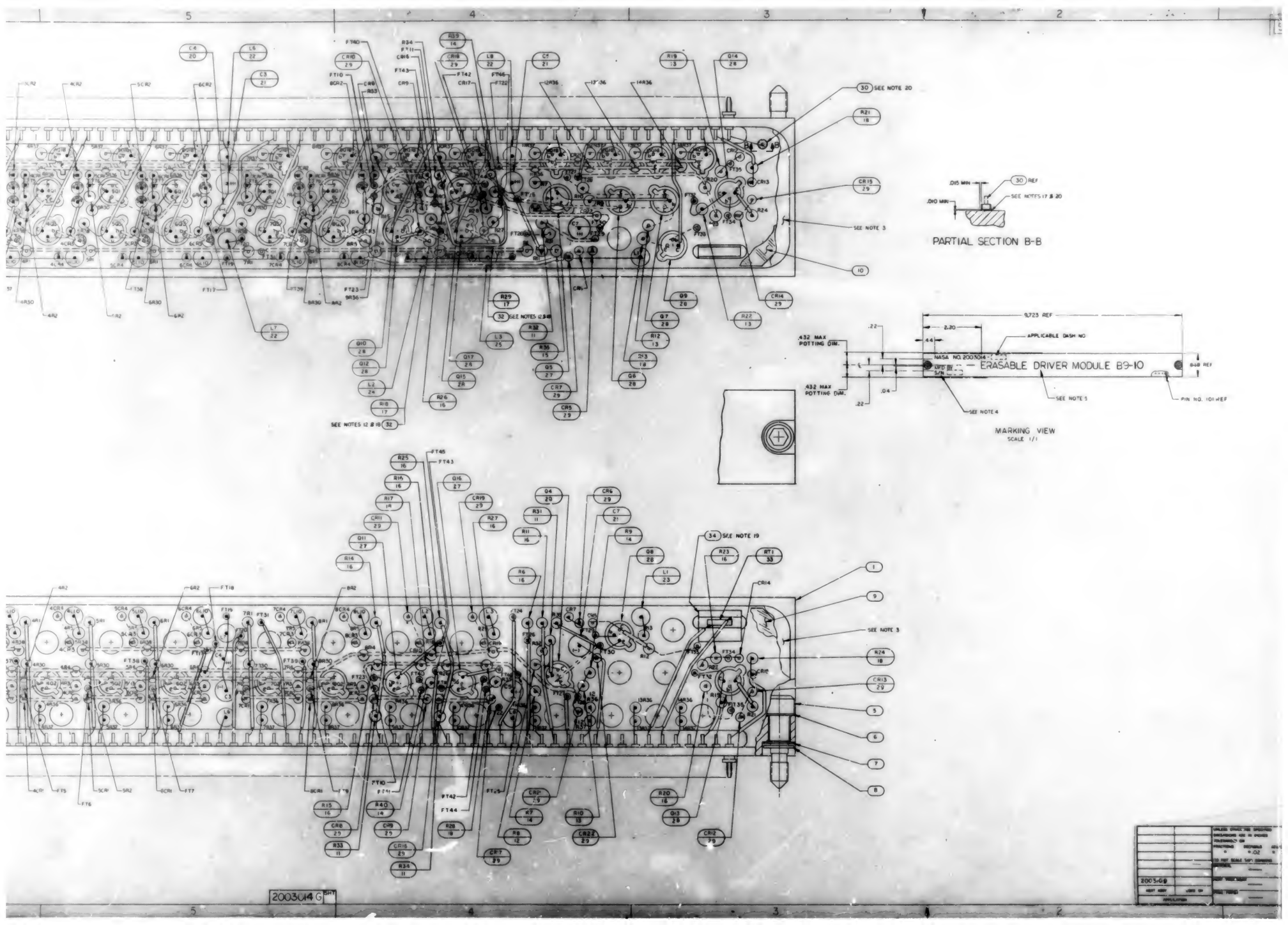






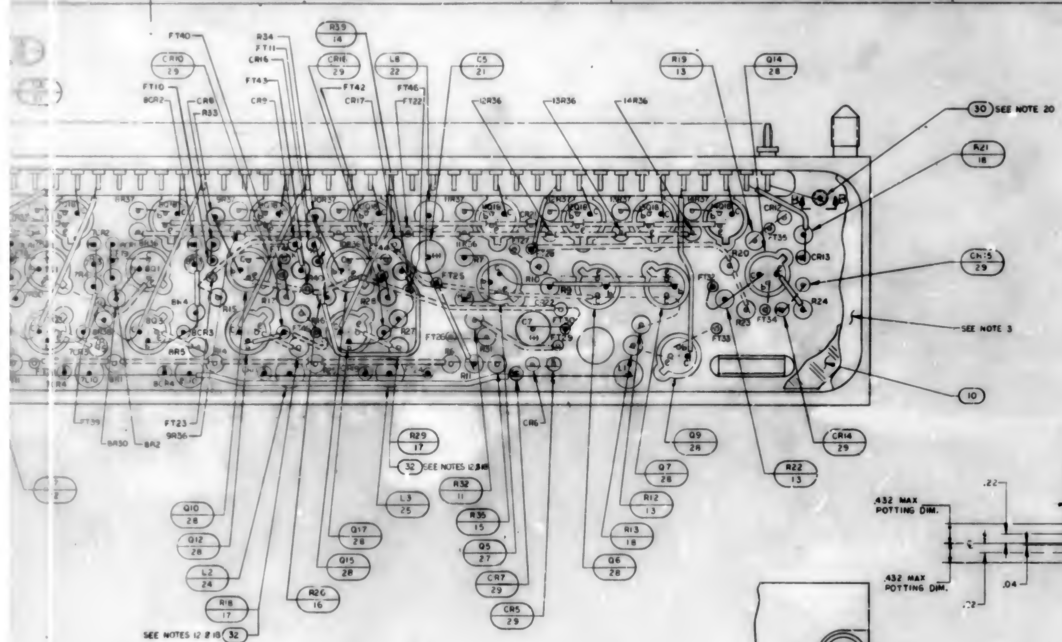
SECTION A-A

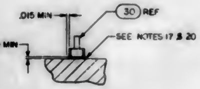
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. ENCAPSULATE PER ND1002002 REMOVE ALL FLASHING
4. MARK JOI08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2. SERIALIZE PER ND1002023 USING MARKING INK 1006271-1
5. MARK 26424 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING MARKING INK 1006271-1
6. AR DENOTES AS REQUIRED
7. FT DENOTES FEED THRU
8. K DENOTES CATHODE SIDE OF DIODE
9. (+) DENOTES POSITIVE SIDE OF CAPACITOR
10. BLACK DOT AND SINGLE SOLID LEAD INDICATE UPPER LEVEL WIRING
11. WHITE DOT AND SINGLE DOTTED LEAD INDICATE LOWER LEVEL WIRING
12. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. R5, R18, & R29 TO BE SELECTED FROM APPROPRIATE CHART
13. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002060
14. STAKE FIND NO 11 THRU FIND NO 29 & FIND NO 33 PER ND1002059 METHOD C OR D
15. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE VI
16. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL OF THE REQUIREMENTS OF PS2003014
17. SEAL FIND NO 30 TO FIND NO.1 PER ND1002004 TYPE XI
18. ASSEMBLE FIND NO. 32 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
19. BOND FIND NO 34 TO FIND NO 1 PER ND1002004 TYPE I
20. MOUNTING TORQUE FOR FIND NO. 30 TO BE 15 TO 20 INCH-OUNCES
21. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002107, TYPE II


PARTIAL SECTION B-B
MARKING VIEW
SCALE 1/1
ERASABLE DRIVER MODULE B9-10
2003014 G

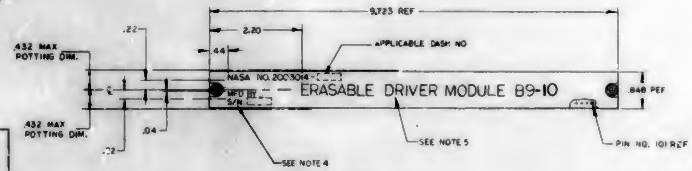
2003014 G

REV	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 17744	[illegible]	[illegible]
B	REVISED PER TDRR 18029	[illegible]	[illegible]
C	REVISED PER TDRR 19682	[illegible]	[illegible]
D	REVISED PER TDRR 18800	[illegible]	[illegible]
E	REVISED PER TDRR 20099	[illegible]	[illegible]
F	REVISED PER TDRR 22160	[illegible]	[illegible]
G	REVISED PER TDRR 23144	10OCT65	[illegible]

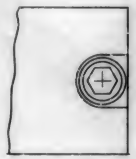


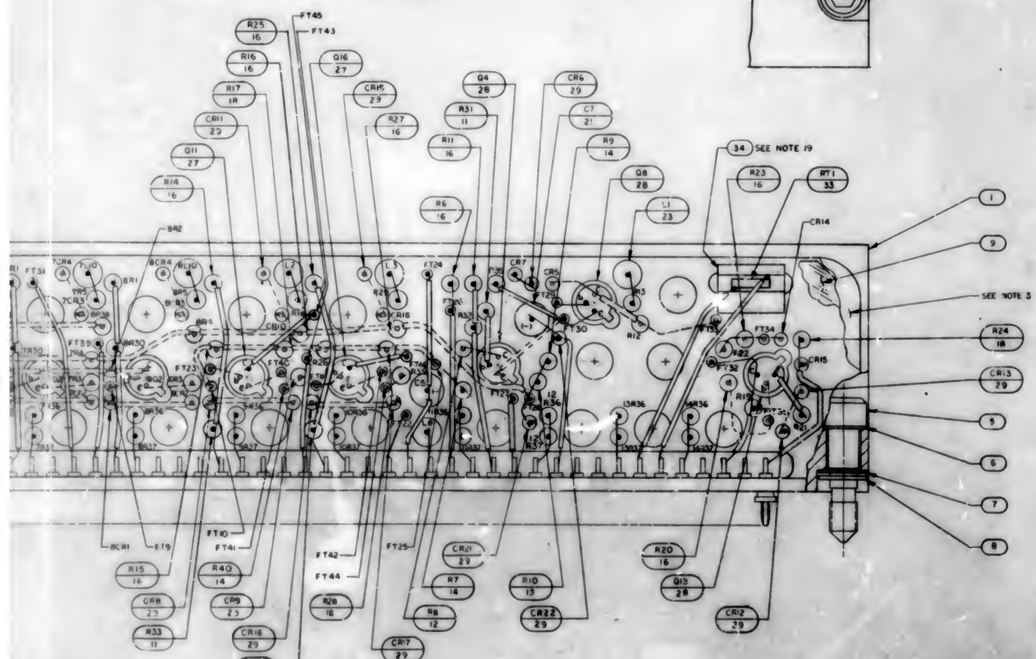


PARTIAL SECTION B-B



MARKING VIEW
SCALE 1/1





QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2005004	SCHEMATIC	REF
1	1004738-001	INSULATOR	34
1	1006712-3	RESISTOR, TEMP SENSITIVE	33
10	2004074	INSULATOR, WASHER	32
AR	1006776-21	INSULATION SLEEVING	31
1	2004035	TERMINAL THREADED	30
50	2004103-001	DIODE	29
49	2004004-001	TRANSISTOR, POTTED	28
3	2004004-002	TRANSISTOR, POTTED	27
8	1010406-8	COIL, RF CHOKE	26
1	1010406-19	COIL, RF CHOKE	25
1	1010406-17	COIL, RF, CHOKE	24
1	1010406-11	COIL, RF, CHOKE	23
5	1010406-7	COIL, RF, CHOKE	22
4	1006755-79	CAPACITOR	21
2	1006755-32	CAPACITOR	20
8	1006750-12	RESISTOR	19
13	1006788-8	RESISTOR	18
10	SEE NOTE 12	RESISTOR	17
40	1006750-49	RESISTOR	16
1	1006750-43	RESISTOR	15
4	1006750-39	RESISTOR	14
12	1006750-32	RESISTOR	13
1	1006750-28	RESISTOR	12
26	1006750-15	RESISTOR	11
1	2004028-011	INSULATOR (A)	10
1	2004029	INSULATOR (B)	9
2	MS16633-4015	RING, RETAINING, EXTERNAL "E"	8
2	1004546-3	WASHER, FLAT	7
2	1004546-1	WASHER, FLAT	6
2	1004579-1	SCREW, JACKING	5
AR	1006776-22	INSULATION, SLEEVING	4
AR	1006757-1	WIRE, ELECTRICAL	3
AR	1006757-8	WIRE, ELECTRICAL	2
1	2003106-011	HEADER, HOUSING, ASSY	1

-011 LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING

2003106

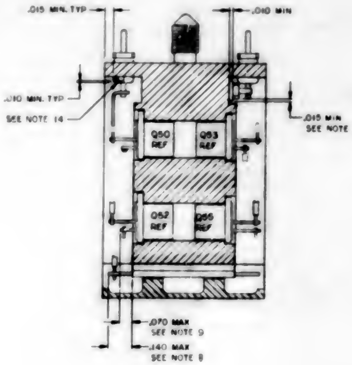
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

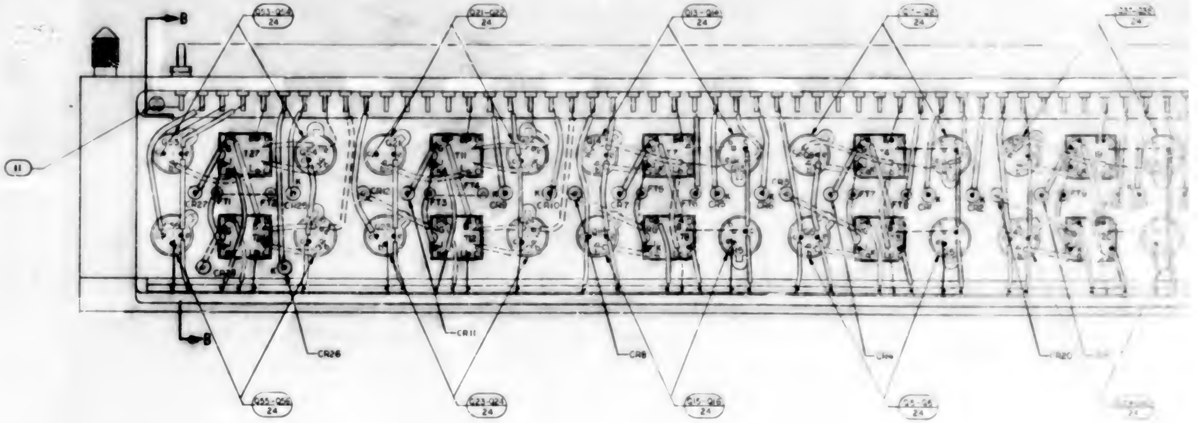
ERASABLE DRIVER MODULE B9-10 ASSEMBLY

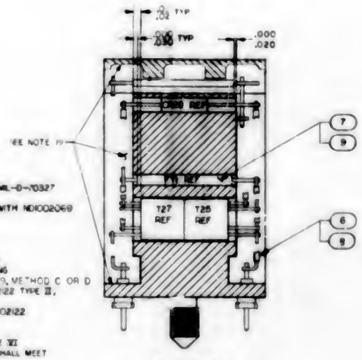
J 2003014

2003014 G

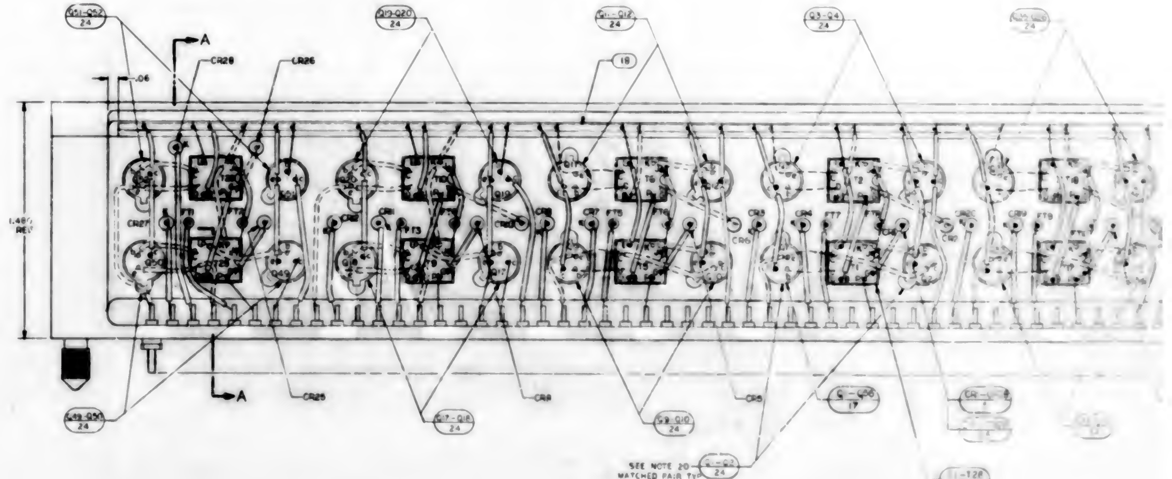


SECTION B-B
SHOWN WITH FIND NO. 3 & 4 REMOVED



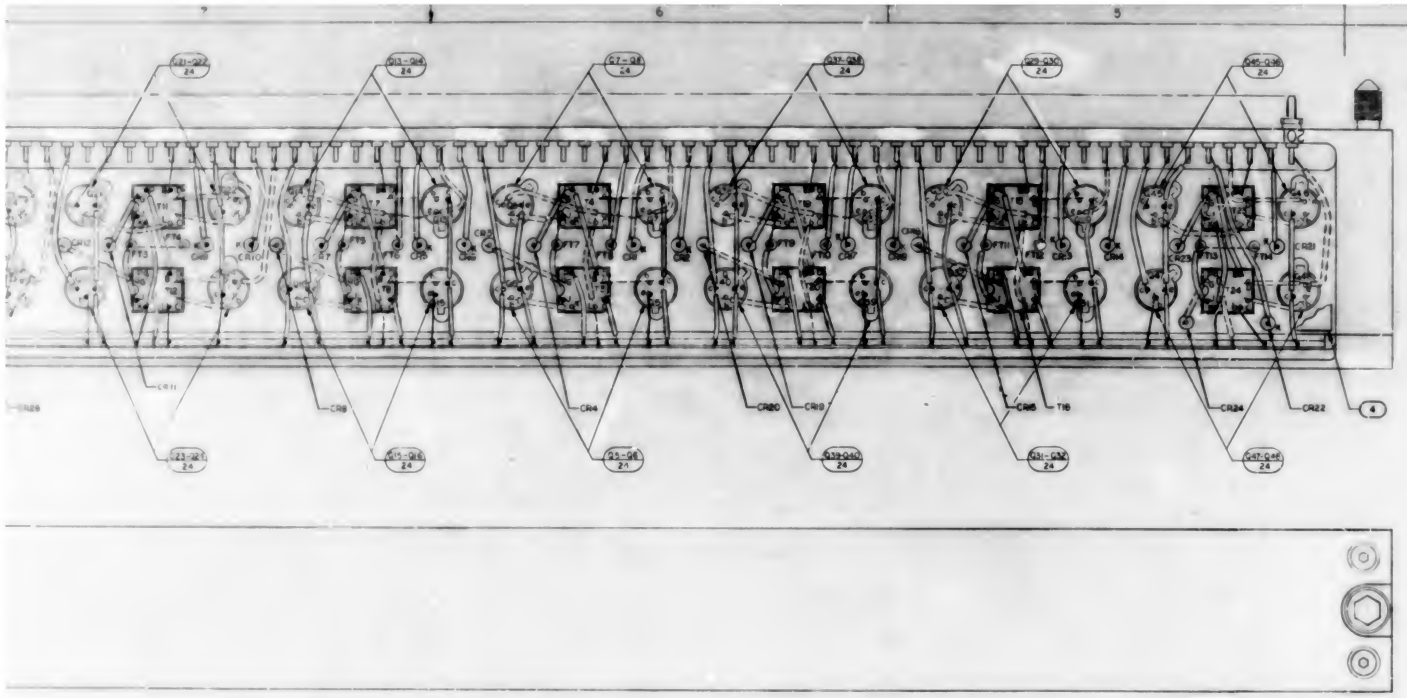


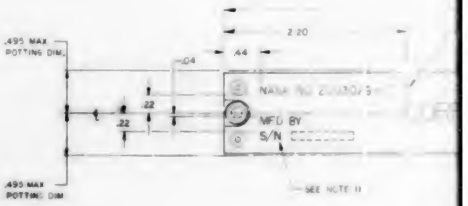
SECTION A-A
SHOWN WITH FIND NO. 3 & 4 REMOVED

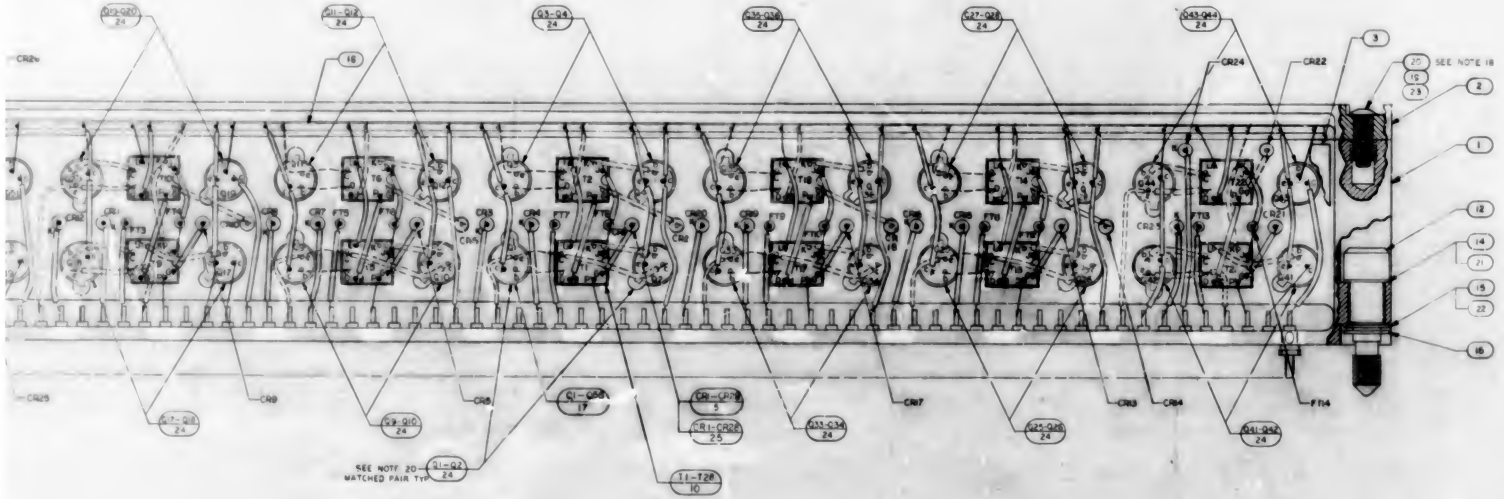


NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. [illegible]
3. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. ENCAPSULATE PER ND1002002. REMOVE FLASHING
5. AR DENOTES AS REQUIRED
6. FT DENOTES FEED THRU
7. K DENOTES CATHODE SIDE OF DIODE
8. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
9. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
10. STAKE FIND NO. 5, 10, 17, 24 AND 25 TO FIND NO. 1 PER ND1002009, METHOD C OR D
11. MARK [illegible] HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2. SERIALIZE PER ND1002023 USING INK 1006271-1
12. MARK [illegible] HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2 USING INK 1006271-1
13. SEAL FIND NO. [illegible] TO HEADER PER ND1002004, TYPE VI
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE VI
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003026
16. BOND FIND NO. 18 TO FIND NO. 1 PER [illegible]
17. MOUNTING TORQUE FOR FIND [illegible] TO BE 15 TO 20 INCH OUNCES
18. [illegible] TORQUE [illegible] TO BE [illegible] TO 25 INCH LBS
19. [illegible] SURFACES, BOTH ENDS, TOP AND BOTTOM, [illegible] TYPE II
20. FIND NO. 24, [illegible] Q2, Q3-Q4, MATCHED PAIRS

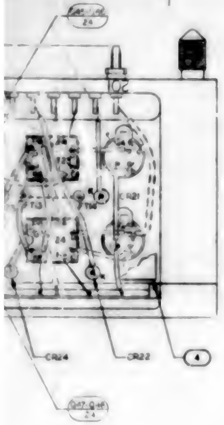
2003026 H

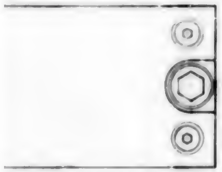


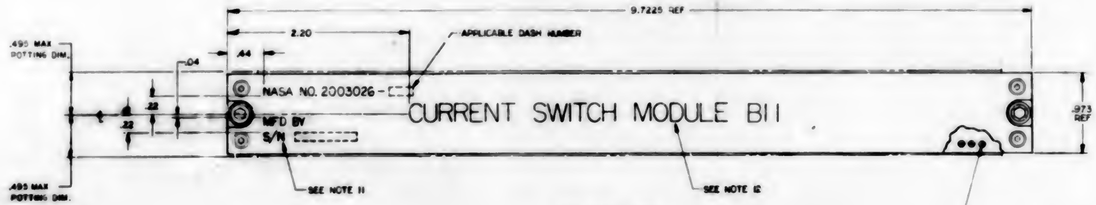

.495 MAX
POTTING DIM.
.04
.44
2.20
.22
.22
MFD BY
S/N
SEE NOTE 11
.495 MAX
POTTING DIM


SEE NOTE 18
SEE NOTE 20
MATCHED PAIR TYP

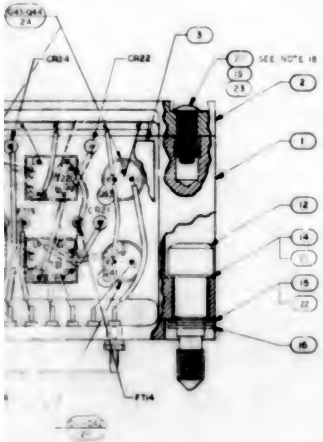
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 20[illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 21252	[illegible]	[illegible]
E	REVISED PER TDRR 2[illegible]40	[illegible]	[illegible]
F	REVISED PER TDRR 23953 DR R.B. CHK [illegible] APPD	[illegible]	[illegible]
G	REVISED PER TDRR 27309 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
–	REVISED PER TDRR [illegible] DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]







MARKING VIEW
SCALE 2/1



QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO
	–	–	2005925	SCHEMATIC	REF
–			2005005	SCHEMATIC	REF
28	–	–	2004183-001	DIODE	25
28	–	–	2004184-00A	TRANSISTOR, POTTED	24
4	4	–	NAS 620A-2	WASHER, FLAT	23
2	2	–	2004984-003	WASHER, FLAT	22
2	2	–	2004184-001	WASHER, FLAT	21
4	4	4	1006783-10	SCREW, BUTTON HD	20
–	–	[illegible]	NAS620[illegible]-2	WASHER, FLAT	19
1	1	1	2003031-011	MATRIX ASSEMBLY	18
–	56	56	2004704-001	TRANSISTOR, POTTED	17
2	2	2	MS16633-4015	RING, RETAINING, EXTERNAL, E	16
–	–	2	1004546-3	WASHER, FLAT	[illegible]
–	–	2	1004546-1	WASHER, FLAT	14
[illegible]	[illegible]	4	[illegible]	SCREW, BUTTON HD	13
2	2	2	1004579-1	SCREW, JACKING	12
1	1	1	2004039	TERMINAL, THREADED	11
28	28	28	1003084-011	ASSEMBLY CORE	10
AR	AR	AR	1006757-6	WIRE, ELECTRICAL	[illegible]
AR	AR	AR	1006757-1	WIRE, ELECTRICAL	[illegible]
AR	AR	AR	1006776-22	INSULATION, SLEEVING	[illegible]
AR	AR	AR	1006776-21	INSULATION, SLEEVING	[illegible]
–	28	28	2004103-001	DIODE	[illegible]
1	1	1	2004041	INSULATOR B	[illegible]
1	1	1	2004040-011	INSULATOR A	[illegible]
1	1	1	2004032	COVER	[illegible]
1	1	1	2003033-011	HEADER HOUSING ASSY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	
2003100	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

M.I.T. INSTRUMENTATION LAB

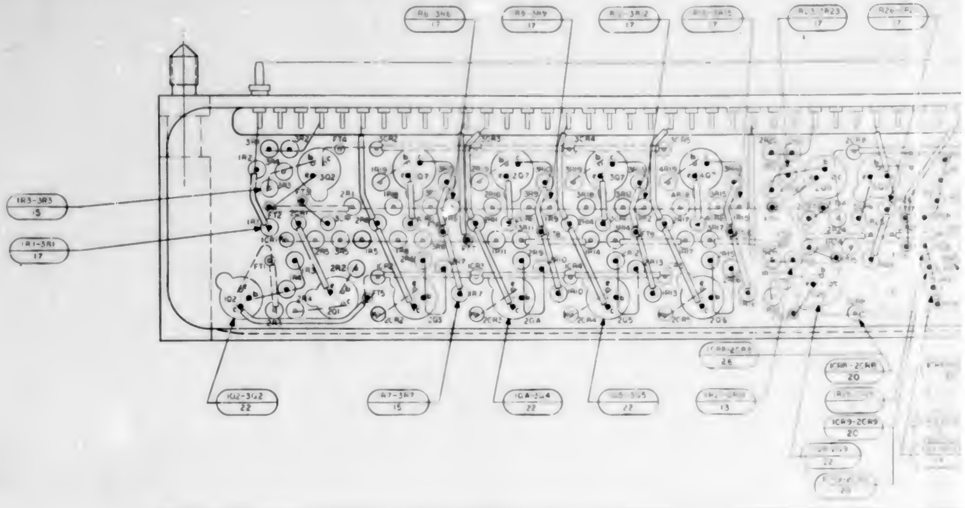
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CURRENT SWITCH MODULE ASSEMBLY B11

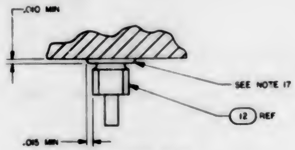
CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003026

SCALE 4/1

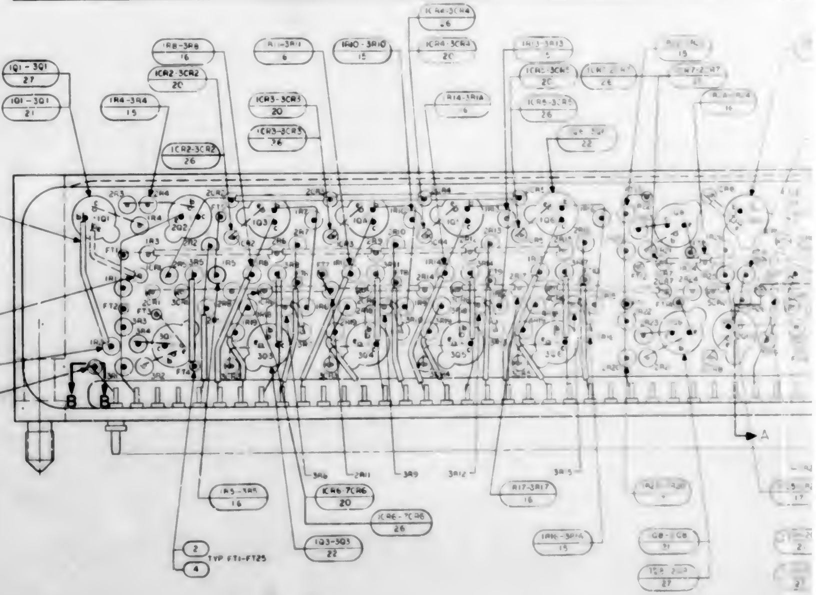
2003026 | H



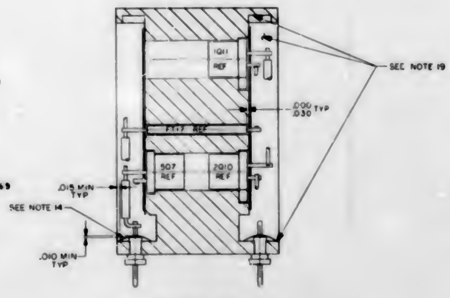
R30, R37, R44	
PART NO.	VALUE (OHMS)
1006788 -34	3.0
-36	3.2
-38	3.4
-40	3.6
-42	3.8
-44	4.0
-46	4.2
-48	4.4
-50	4.6
-2	4.8
-4	5.0
-55	5.2
-56	5.4
-57	5.6
-58	5.8
-59	6.0
-60	6.3
-61	6.6
-62	6.9
-63	7.2
-64	7.5
-65	8.0
-66	8.5
-67	9.0
-68	9.5
1006788 -6	10



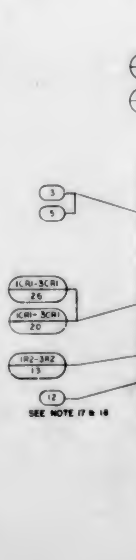
PARTIAL SECTION B-B
SCALE 10/1



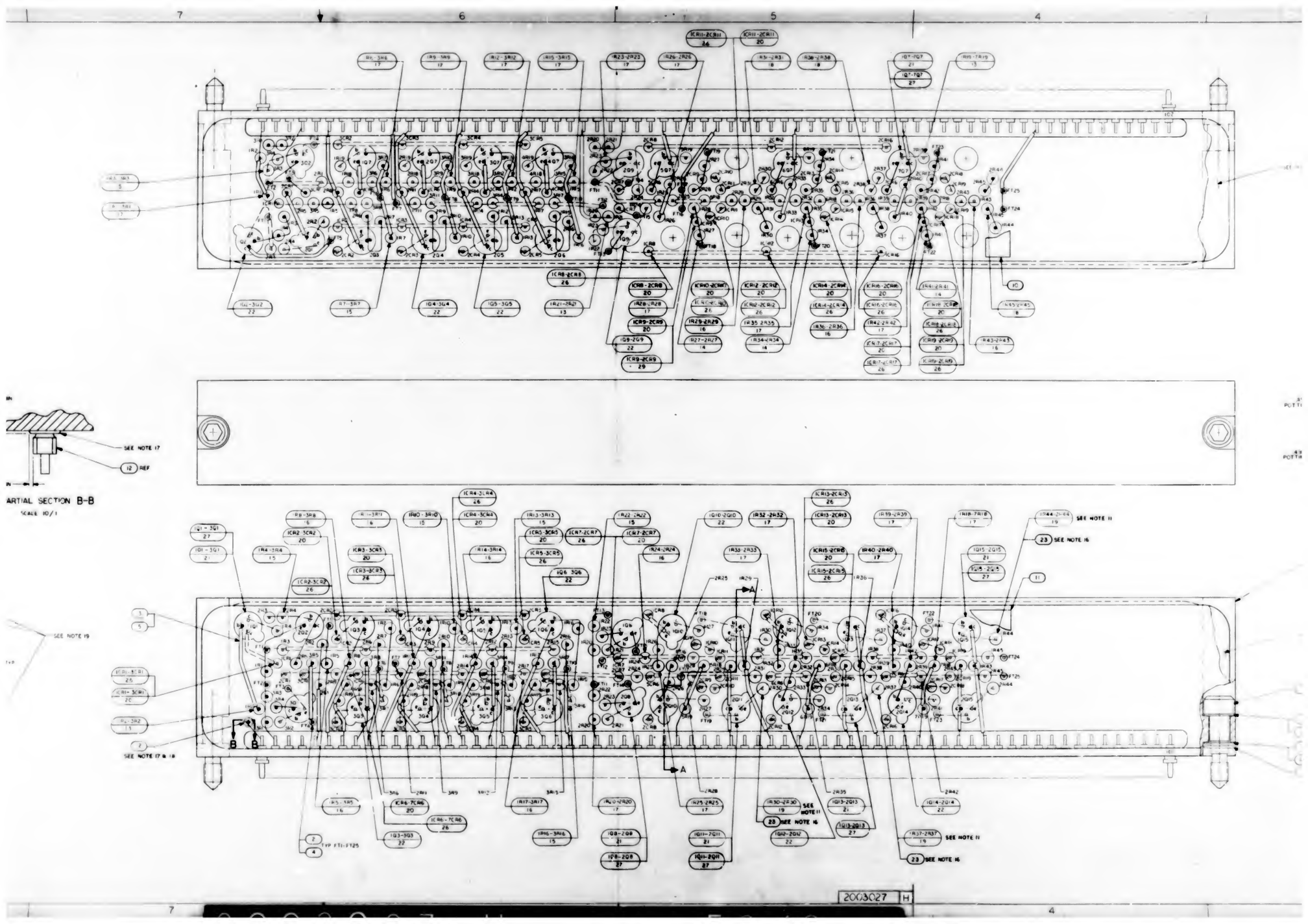
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002105
3. ENCAPSULATE PER ND1002002 REMOVE FLASHING
4. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2 AND SERIALIZE PER ND1002023 USING MARKING INK 1006271-1
5. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING MARKING INK 1006271-1
6. AR DENOTES AS REQUIRED
7. FT DENOTES FEED THRU
8. ● DENOTES CATHODE SIDE OF DIODE
9. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
10. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. R30, R37 AND R44 TO BE SELECTED FROM APPROPRIATE CHART
12. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
13. STAMP ALL COMPONENTS PER ND1002009 METHOD C OR D
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE VI
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003027
16. ASSEMBLE FIND NO. 23 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
17. SEAL FIND NO. 12 TO FIND NO. 1 PER ND1002004 TYPE VI
18. MOUNTING TORQUE FOR FIND NO. 12 TO BE 15-20 INCH OUNCES
19. COAT INDICATED SURFACES, BOTH ENDS TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II

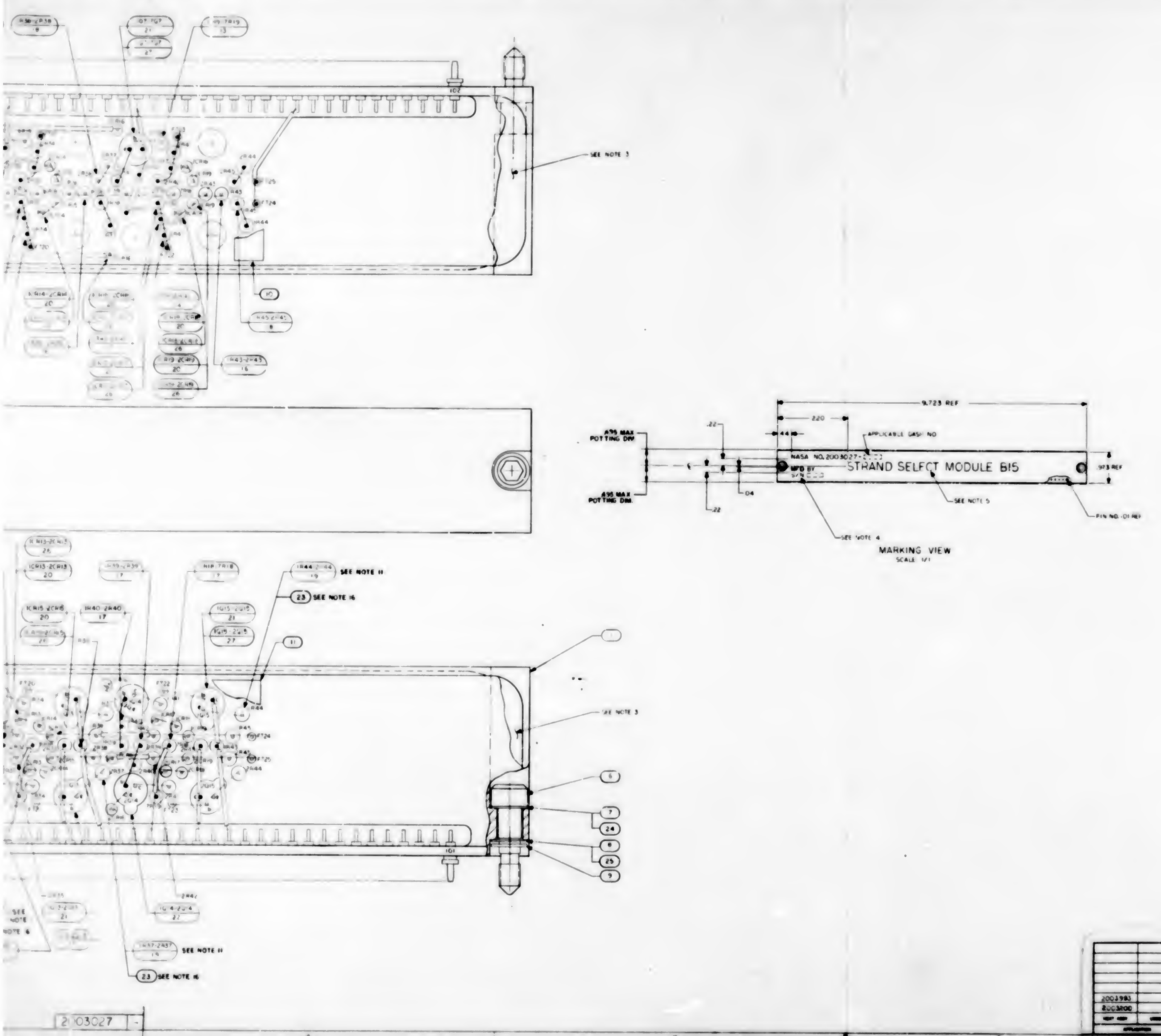


SECTION A-A



2003027 H


SEE NOTE 17
12 REF
ARTIAL SECTION B-B
SCALE 10/1
SEE NOTE 19
SEE NOTE 17 & 18
SEE NOTE 11
SEE NOTE 16
TYP FT1-FT25
2003027 H



REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 17745	[illegible]	[illegible]
B	REVISED PER TDRR 18799	[illegible]	[illegible]
C	REVISED PER TDRR 20097	[illegible]	[illegible]
D	REVISED PER TDRR 22252	[illegible]	[illegible]
E	REVISED PER TDRR 27359	[illegible]	[illegible]
F	REVISED PER TDRR 28160	[illegible]	[illegible]
G	REVISED PER TDRR 29217	[illegible]	[illegible]
H	REVISED PER TDRR 32561	[illegible]	[illegible]

QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
X	—	—	2005926	SCHEMATIC	REF
—	—	X	2005919	SCHEMATIC	REF
—	X	—	2005924	SCHEMATIC	REF
8	—	—	2004184-001	TRANSISTOR, POTTED	27
48	—	—	2004183-001	DIODE	26
2	2	—	2004984-003	WASHER, FLAT	25
2	2	—	2004984-004	WASHER, FLAT	24
6	6	6	2004076	INSULATOR, WASHER	23
23	23	23	2004004-002	TRANSISTOR, POTTED	22
—	16	16	2004004-001	TRANSISTOR, POTTED	21
—	48	48	2004103-001	DIODE	20
6	6	6	SEE NOTE 11	RESISTOR	19
6	6	6	1006783-59	RESISTOR	[illegible]
44	44	49	1006750-49	RESISTOR	[illegible]
23	23	23	1006750-43	RESISTOR	[illegible]
20	20	15	1006750-39	RESISTOR	[illegible]
6	6	6	1006750-28	RESISTOR	[illegible]
12	12	12	1006750-15	RESISTOR	[illegible]
1	1	1	2004039	TERMINAL, THREADED	[illegible]
1	1	1	2004042-011	INSULATOR A	[illegible]
1	1	1	2004043	INSULATOR B	10
2	2	2	MS16633-4015	RING, RETAINING	9
—	—	2	1004546-3	WASHER, FLAT	8
—	—	2	1004546-1	WASHER, FLAT	7
2	2	2	1004579-1	SCREW, JACKING	6
AR	AR	AR	1006776-21	INSULATION, SLEEVING	5
AR	AR	AR	1006776-22	INSULATION, SLEEVING	4
AR	AR	AR	1006757-1	WIRE, ELECTRICAL	[illegible]
AR	AR	AR	1006757-8	WIRE, ELECTRICAL	[illegible]
1	1	1	2003024-011	HEADER HOUSING ASSEMBLY	[illegible]
-031	-021	-011	LIST OF MATERIALS		

2003983	
2003800	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± .02 ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
DRAWN / CHECKED / APPROVED / APPROVED
NASA APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

STRAND SELECT MODULE B15 ASSEMBLY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003027

SCALE 4/1 SHEET 1 OF 1

R2	
PART NO.	VALUE
1006750-39	2.0K
-124	2.15K
-125	2.55K
-42	27 R
-43	30
-44	3.3K
-45	3.4K
-46	3.9K
-47	4.3K
-48	4.7K
-49	5.1K
-50	5.6K
-51	6.2K
-52	6.8K
-136	7.15K
-53	7.5K
-137	7.85K
-54	8.2K
-138	8.65K
-55	9.1K
-139	9.55K
-56	10K
-140	10.5K
-57	11K
-141	11.5K
-58	12K
-142	12.5K
-59	13K
-143	14K
-60	15K
-144	15.5K
-61	16K
-145	17K
-62	18K
-146	19K
-63	20K
-147	21K
1006750-64	22K
SEE NOTE 14	∞

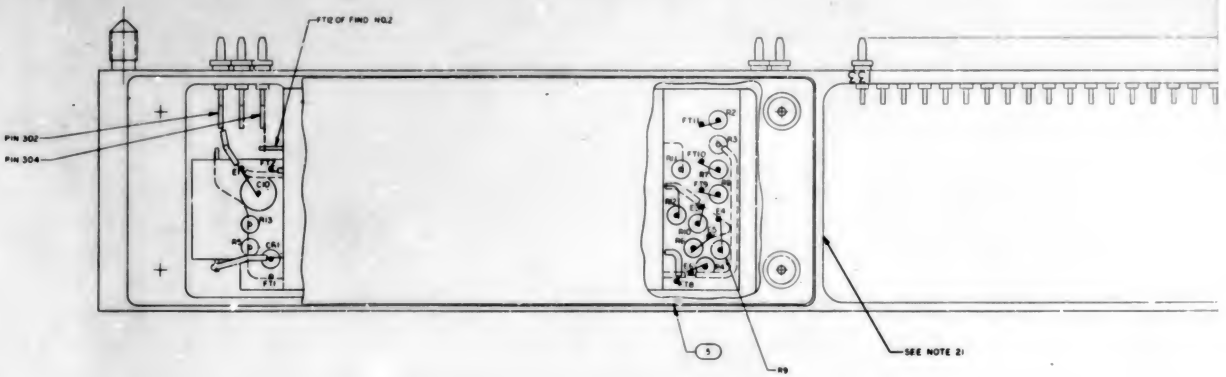
R4 AND R6			
PART NO.	VALUE	PART NO.	VALUE
1006750-25	510	1006750-128	2.85K
-109	535	-93	3K
-26	560	-127	3.15K
-110	590	-44	3.3K
-27	620	-129	3.45K
-111	650	-45	3.6K
-28	680	-46	3.75K
-112	715	-46	3.9K
-29	750	-130	4.1K
-113	785	-47	4.3K
-30	820	-131	4.5K
-114	865	-48	4.7K
-31	910	-132	4.9K
-115	953	-49	5.1K
-32	1K	-133	5.35K
-116	1.05K	-50	5.6K
-33	1.1K	-134	5.9K
-117	1.15K	-51	6.2K
-34	1.2K	-135	6.5K
-118	1.25K	-52	6.8K
-35	1.3K	-136	7.15K
-119	1.4K	-53	7.5K
-36	1.5K	-137	7.85K
-120	1.55K	-54	8.2K
-37	1.6K	-138	8.65K
-121	1.7K	-55	9.1K
-38	1.8K	-139	9.55K
-122	1.9K	-56	10K
-39	2.0K	-140	10.5K
-123	2.1K	-57	11K
-40	2.2K	-141	11.5K
-124	2.3K	-58	12K
-41	2.4K	1006757-8	0
-125	2.55K	SEE NOTE 14	∞
1006750-42	2.7K		

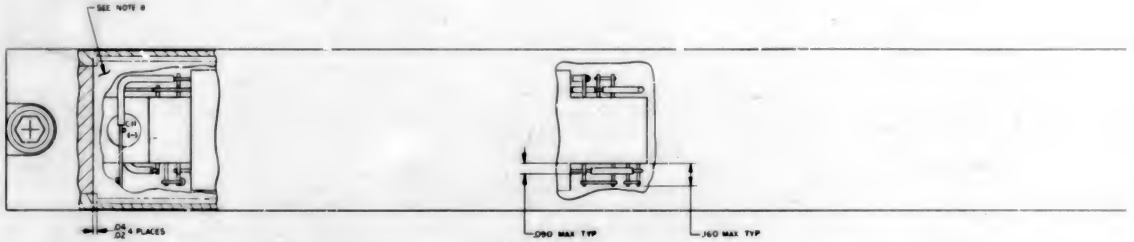
R9			
PART NO.	VALUE	PART NO.	VALUE
1006750-25	510	1006750-134	5.9K
-109	535	-51	6.2K
-26	560	-135	6.5K
-110	590	-52	6.8K
-27	620	-136	7.15K
-111	650	-53	7.5K
-28	680	-137	7.85K
-112	715	-54	8.2K
-29	750	-138	8.65K
-113	785	-55	9.1K
-30	820	-139	9.55K
-114	865	-56	10K
-31	910	-140	10.5K
-115	953	-57	11K
-32	1K	-141	11.5K
-116	1.05K	-58	12K
-33	1.1K	-142	12.5K
-117	1.15K	-59	13K
-34	1.2K	-143	14K
-118	1.25K	-60	15K
-35	1.3K	-144	15.5K
-119	1.4K	-61	16K
-36	1.5K	-145	17K
-120	1.55K	-62	18K
-37	1.6K	-146	19K
-121	1.7K	-63	20K
-38	1.8K	-147	21K
-122	1.9K	-64	22K
-39	2.0K	-148	23K
-123	2.1K	-65	24K
-40	2.2K	-149	25.5K
-124	2.3K	-66	27K
-41	2.4K	-150	28.5K
-125	2.55K	-67	30K
-42	2.7K	-151	31.5K
-126	2.85K	-68	33K
-43	3K	-152	34.5K
-127	3.15K	-69	36K
-44	3.3K	-153	37.5K
-128	3.45K	-70	39K
-45	3.6K	-154	41K
-129	3.75K	-71	43K
-46	3.9K	-155	45K
-130	4.1K	-72	47K
-47	4.3K	-156	49K
-131	4.5K	-73	51K
-48	4.7K	-157	53.5K
-132	4.9K	-74	56K
-49	5.1K	-158	59K
-133	5.35K	-75	62K
-50	5.6K	-159	65K
-134	5.9K	-76	68K
-51	6.2K	-160	75K
-135	6.5K	-161	78.5K
-52	6.8K	-78	82K
-136	7.15K	-162	86.5K
-53	7.5K	-79	91K
1006750-136	7.15K	1006750-163	95.5K

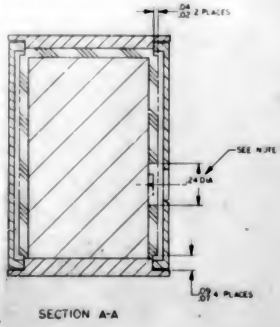
R10			
PART NO.	VALUE	PART NO.	VALUE
1006750-32	1K	1006750-53	2.5K
-116	1.05K	-137	7.85K
-33	1.1K	-54	8.2K
-117	1.15K	-138	8.65K
-34	1.2K	-55	9.1K
-118	1.25K	-139	9.55K
-35	1.3K	-56	10K
-119	1.4K	-140	10.5K
-36	1.5K	-57	11K
-120	1.55K	-141	11.5K
-37	1.6K	-58	12K
-121	1.7K	-142	12.5K
-38	1.8K	-59	13K
-122	1.9K	-143	14K
-39	2.0K	-60	15K
-123	2.1K	-144	15.5K
-40	2.2K	-61	16K
-124	2.3K	-145	17K
-41	2.4K	-62	18K
-125	2.55K	-146	19K
-42	2.7K	-63	20K
-126	2.85K	-147	21K
-43	3K	-64	22K
-127	3.15K	-148	23K
-44	3.3K	-65	24K
-128	3.45K	-66	27K
-45	3.6K	-150	28.5K
-129	3.75K	-67	30K
-46	3.9K	-151	31.5K
-130	4.1K	-68	33K
-47	4.3K	-152	34.5K
-131	4.5K	-69	36K
-48	4.7K	-153	37.5K
-132	4.9K	-70	39K
-49	5.1K	-154	41K
-133	5.35K	-71	43K
-50	5.6K	-155	45K
-134	5.9K	-72	47K
-51	6.2K	-156	49K
-135	6.5K	-73	51K
-52	6.8K	1006750-73	51K
1006750-136	7.15K	SEE NOTE 14	∞

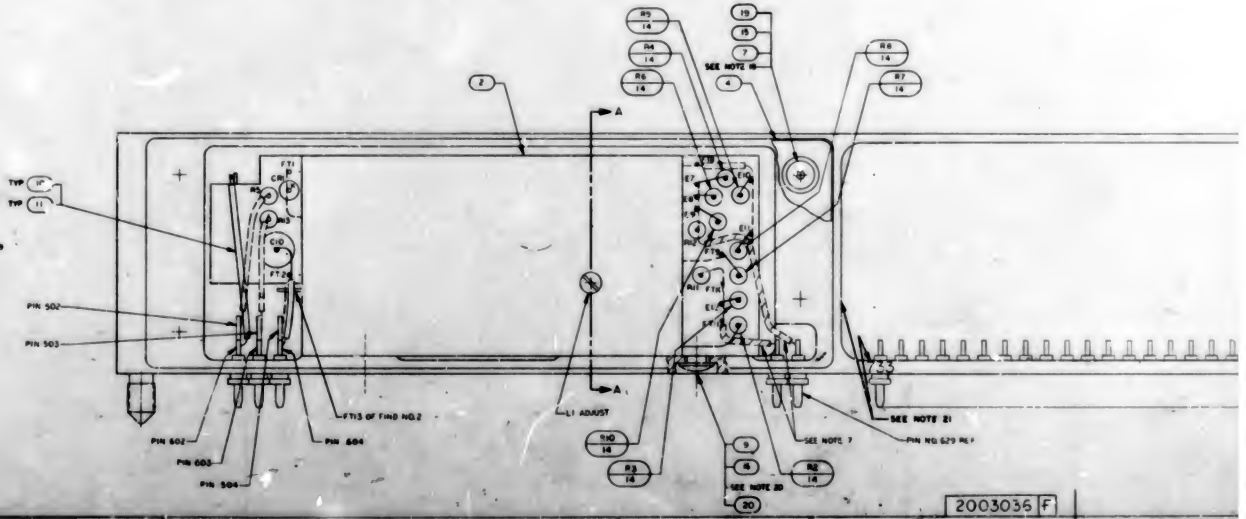
R3 AND R8	
PART NO.	VALUE
1006750-56	10K
-140	10.5K
-57	11K
-141	11.5K
-58	12K
-142	12.5K
-90	13K
-143	14K
-60	15K
-144	15.5K
-61	16K
-145	17K
-62	18K
-146	19K
-63	20K
-147	21K
-64	22K
-148	23K
-65	24K
-149	25.5K
-66	27K
-150	28.5K
-67	30K
-151	31.5K
-68	33K
-152	34.5K
-69	36K
-153	37.5K
-70	39K
-154	41K
-71	43K
-155	45K
-72	47K
-156	49K
-73	51K
-157	53.5K
-74	56K
-158	59K
-75	62K
-159	65K
-76	68K
-160	75K
-77	78.5K
-161	82K
-78	86.5K
-162	91K
-79	95.5K
-163	100K
-164	110K
-81	115K
-165	120K
-82	125K
-166	130K
-83	140K
-167	150K
1006750-84	150K

R5	
PART NO.	VALUE
1006750-157	53.5K
-74	56K
-158	59K
-75	62K
-159	65K
-76	68K
-160	75K
-77	78.5K
-161	78.5K
-78	82K
-162	86.5K
-79	91K
-163	95.5K
-80	100K
-164	110K
-81	115K
-165	120K
-82	125K
-166	130K
-83	140K
-167	150K
1006750-84	150K





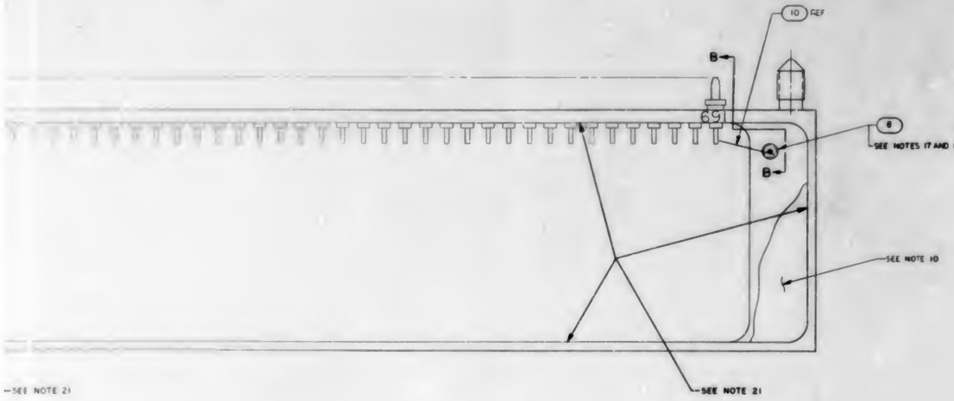


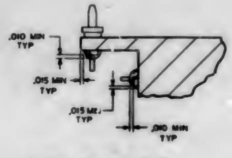


NOTES:

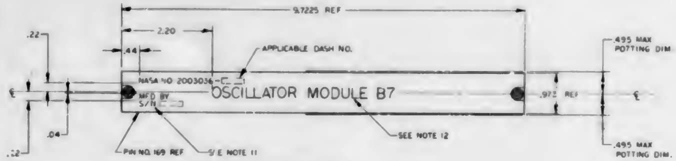
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. AR DENOTES AS REQUIRED
4. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
5. WHITE DOT AND SINGLE-DOTTED LEADS INDICATE LOWER LEVEL WIRING
6. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
7. BEFORE ENCAPSULATING REMOVE (CROSS HATCHED LEADS FROM R12 FIND NO. 2 TO PIN 629 AND FROM FT11 FIND NO. 2 TO PIN 629
8. ENCAPSULATE PER ND1002009 METHOD F USING 0% THINNER
9. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
10. ENCAPSULATE PER ND1002002 PRIOR TO ASSEMBLY OF FIND NO. 2 TO FIND NO. 1. REMOVE FLASHING
11. MARK 10/08 HIGH WHITE CHARACTERS PER ND1002009 AND ND1002022 TYPE II CLASS 2 USING INK 1006271-1 SERIALIZE PER ND1002073
12. MARK 26/24 HIGH WHITE CHARACTERS PER ND1002009 AND ND1002022 TYPE II CLASS 2 USING INK 1006271-1
13. SELECT R2, R3, R4, AND R6 THRU R10 PER APPLICABLE PS FROM APPROPRIATE CHART UTILIZING 1006750 OR 1010733
14. WHEN VALUE OF R6, R8, R9 OR R10 IS INFINITY OHM NO COMPONENT WILL BE USED
15. SEAL INSULATORS AND TERMINALS TO HEADER PER ND 1002004 TYPE III
16. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003016
17. MOUNTING TORQUE FOR FIND NO 8 TO BE 15-20 INCH OUNCES
18. MOUNTING TORQUE FOR FIND NO. 9 TO BE 20/25 INCH POUNDS
19. SEAL FIND NO 8 TO FIND NO 1 PER ND1002004 TYPE III
20. MOUNTING TORQUE FOR FIND NO 3 TO BE 4-6 INCH POUNDS
21. COAT INDICATED SURFACES: BOTH ENDS, TOP AND BOTTOM AND BOTH SIDES PER ND 1002107 TYPE II

2003036 F

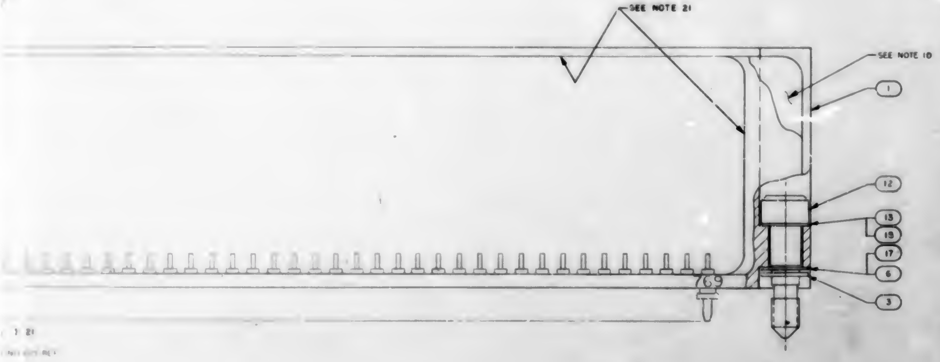




PARTIAL SECTION B-B
SEE NOTE 15



MARKING VIEW
SCALE 1/1



R2, R3, R4, R6, R7, R8, R9 AND R10					
PART NO.	VALUE	PART NO.	VALUE	PART NO.	VALUE
1010733 - 121	511	1010733 - 313	5110	1010733 - 490	42700
-125	536	-317	5360	-494	44800
-128	556	-320	5560	-497	46400
-133	590	-323	5760	-499	47500
-136	612	-325	5900	-501	48700
-141	649	-328	6120	-503	49900
-144	673	-330	6260	-505	51100
-149	715	-333	6490	-507	52300
-153	750	-336	6730	-509	53600
-156	777	-341	7150	-512	5[illegible]600
-160	816	-345	7500	-515	57600
-165	866	-348	7770	-517	59[illegible]
-169	909	-352	8160	-520	61200
-173	953	-355	8450	-522	62600
-176	988	-357	8660	-525	64900
-178	1010	-361	9090	-528	67300
-181	1050	-365	9530	-530	69000
-185	1100	-368	9880	-533	71500
-189	1150	-370	10100	-535	73200
-192	1200	-373	10500	-537	75000
-195	1240	-377	11000	-540	77700
-199	1300	-381	11500	-542	79600
-204	1380	-384	12000	-544	81600
-208	1470	-387	12400	-546	[illegible]
-212	1540	-391	13000	-549	[illegible]
-216	1600	-396	13800	-551	88700
-221	1690	-401	14700	-553	90900
-225	1780	-405	15400	-555	93100
-230	1890	-408	16000	-557	[illegible]
-234	1980	-413	16900	-560	98800
-239	2100	-417	17800	-562	101000
-243	2210	-420	18400	-565	105000
-246	2290	-422	18900	-569	110000
-250	2400	-426	19800	-573	115000
-254	2520	-428	20300	-576	120000
-259	2670	-431	21000	-579	124000
-264	2840	-435	22100	-583	130000
-268	3010	-438	22900	-588	138000
-273	3160	-442	24000	-593	147000
-277	3320	-446	25200	-597	154000
-280	3440	-451	26700	1010733 - 600	160000
-284	3610	-456	28400		
-287	3740	-461	30100		
-291	3920	-465	31600		
-295	4120	-469	33200		
-298	4270	-472	34400		
-302	4480	-476	36100		
-305	4640	-479	37400		
-308	4810	-483	39200		
1010733 - 310	4930	1010733 - 487	41200		

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 15684				
B		REVISED PER TDRR 23218	KTN			
C		REVISED PER TDRR 24218	SCT			
D		REVISED PER TDRR 25149	AJG			
E		REVISED PER TDRR 25930				
F		REVISED PER TDRR 27309				

QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO.
		2005003	SCHEMATIC	REF
2	—	NAS620A-4L	WASHER, FLAT	20
8	—	NAS620A-2	WASHER, FLAT	19
2	—	2004984-001	WASHER, FLAT	18
2	—	2004984-003	WASHER, FLAT	17
—	2	NAS620C-4L	WASHER, FLAT	16
—	8	NAS620C2	WASHER, FLAT	15
8	8	SEE NOTE 13	RESISTOR	14
—	2	1004546-1	WASHER, FLAT	13
2	2	1004575-1	SCREW, JACKING	12
AR	AR	1006776-22	INSULATION, SLEEVING	11
AR	AR	1006757-8	WIRE, ELECTRICAL	10
2	2	1006763-8	SCREW, BUTTON HEAD	9
1	1	2004039	TERMINAL, THREADED	8
8	8	1006763-9	SCREW, BUTTON HEAD	7
—	2	1004546-3	WASHER, FLAT	6
1	1	2004062	COVER B	5
1	1	2004061	COVER A	4
2	2	MS16633-4015	RING, RETAINING	3
1	1	2003035-011	OSCILLATOR SUBASSEMBLY	2
1	1	2003037-011	HEADER HOUSING ASSEMBLY	1

LIST OF MATERIAL

MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

OSCILLATOR MODULE B7 ASSEMBLY

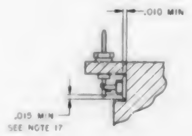
NEXT ASSY	USED ON
2003200	
2003100	

APPLICATION

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003036

SCALE 1/1

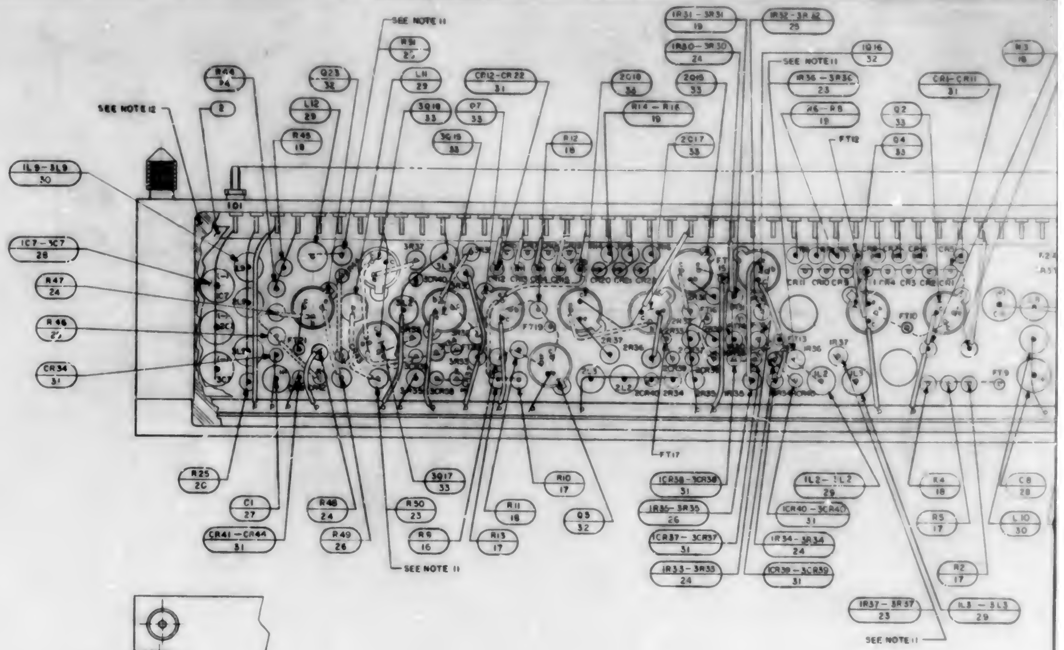
2003036 F

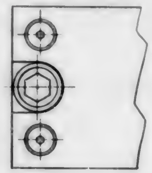


SECTION B-B

R36, R37	
PART NO.	VALUE
1006788 — 29	2.5
— 30	2.6
— 31	2.7
— 32	2.8
— 33	2.9
— 34	3.0
— 35	3.1
— 36	3.2
— 37	3.3
— 38	3.4
— 39	3.5
— 40	3.6
— 41	3.7
— 42	3.8
— 43	3.9
— 44	4.0
— 45	4.1
— 46	4.2
— 47	4.3
— 48	4.4
1006788 — 49	4.5

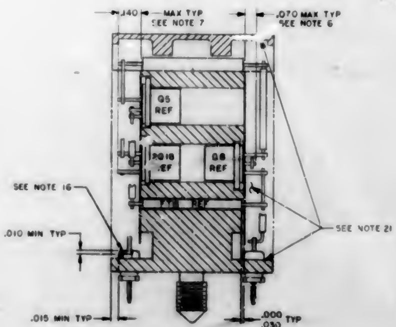
R29, R50, R51	
PART NO.	VALUE
1006788 -51	1.5
-53	1.6
-16	1.7
-18	1.8
-20	1.9
-22	2.0
-24	2.1
-26	2.2
-28	2.3
-15	2.4
-29	2.5
-30	2.6
-31	2.7
-32	2.8
-73	2.75
-72	2.65
-71	2.55
-70	2.45
-69	2.35
-27	2.25
-25	2.15
-23	2.05
-21	1.95
-19	1.85
-17	1.75
-54	1.65
1006788 -52	1.55



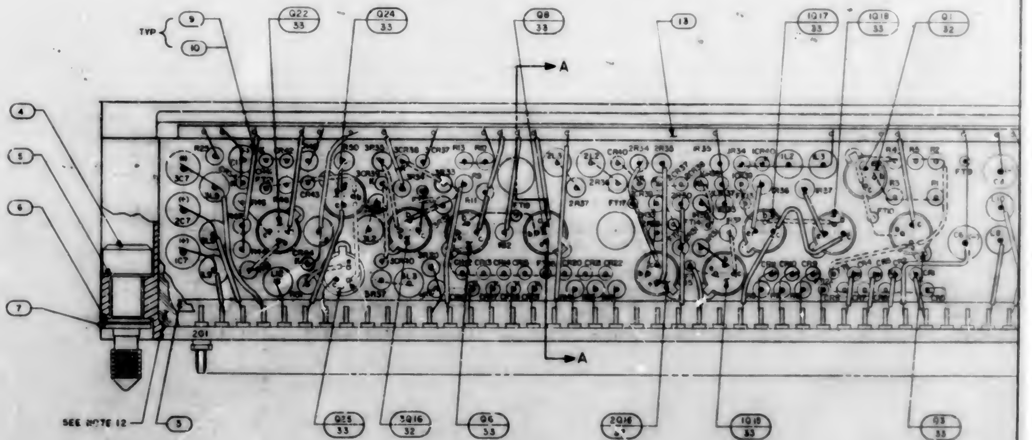


NOTES:

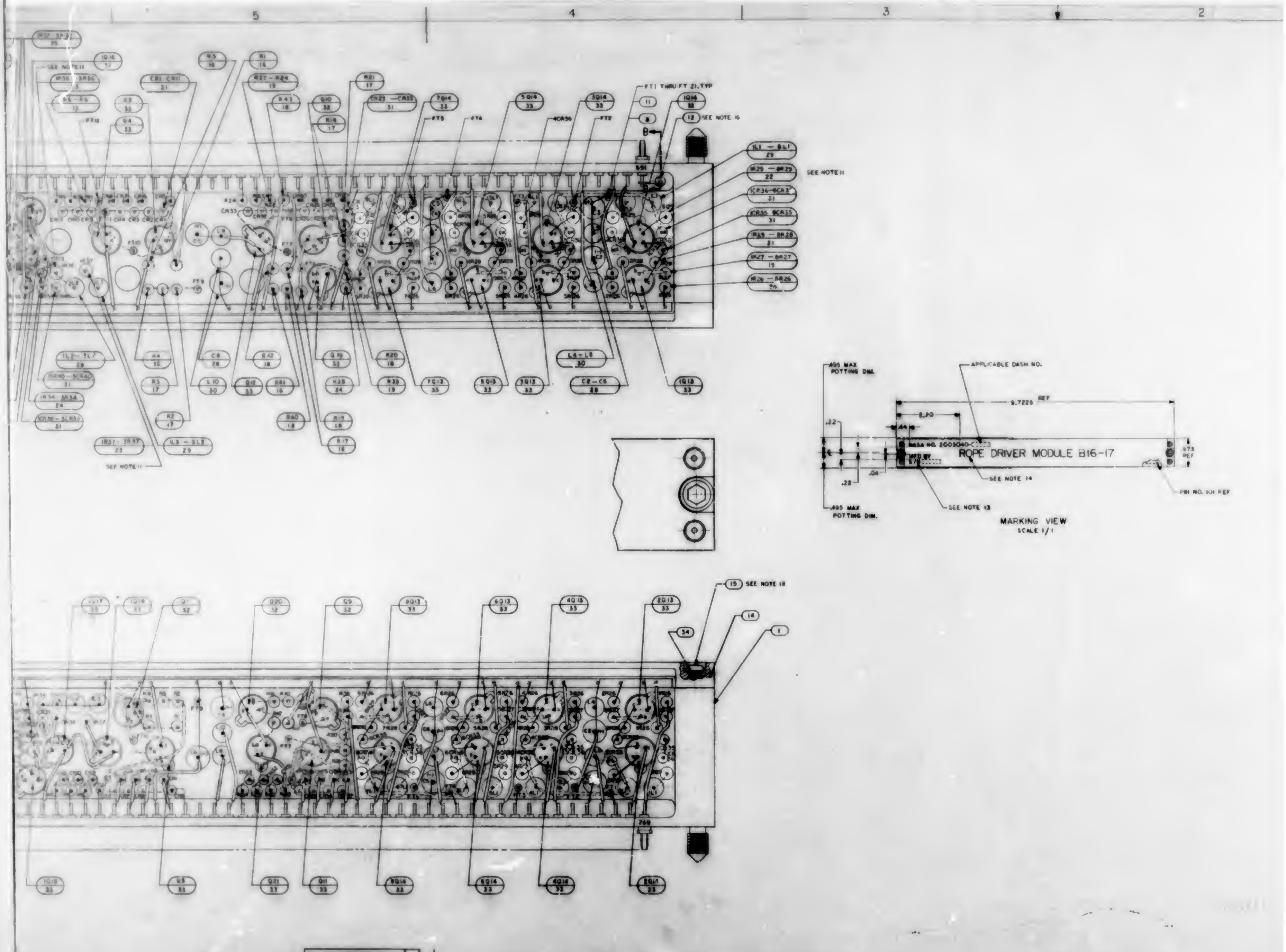
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. [illegible]
3. FT DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
7. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
8. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND 1002069
9. WELD PER ND [illegible]
10. STAKE FIND NO. 16 THRU FIND NO. 33 TO FIND NO. 1 PER ND 1002009, METHOD C OR D
11. SELECT R29, R36, R37, R50 AND R51 PER APPLICABLE PS FROM APPROPRIATE CHART
12. ENCAPSULATE PER ND 1002002. REMOVE FLASHING
13. MARK .[illegible]/.[illegible] HIGH WHITE CHARACTERS PER ND 1002019 AND ND 1002122 TYPE II, CLASS 2 AND SERIALIZE PER ND 1002023 USING INK 1006271-1
14. MARK .16/.24 HIGH WHITE CHARACTERS PER ND 1002019 AND ND 1002122 TYPE II, CLASS 2 USING INK 1006271-[illegible]
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003040
16. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE XI
17. SEAL FIND NO. 12 TO HEADER PER ND1002004, TYPE XI
18. MOUNTING TORQUE FOR FIND NO. 15 TO BE 2.0 – 2.5 INCH POUNDS
19. MOUNTING TORQUE FOR FIND NO. 12 TO BE [illegible] INCH OUNCES
20. STAKE FIND NO. 8 TO FIND NO. 1 PER ND1002004, TYPE I
21. [illegible] SURFACES [illegible] ENDS [illegible] AND BOTTOM, BOTH SIDES, PER ND1002187, TYPE II



SECTION A-A



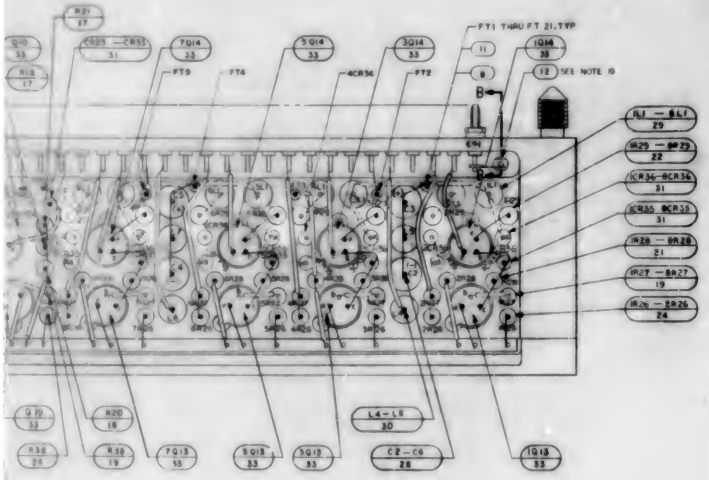
2003040 C

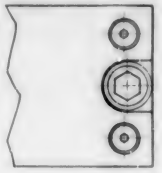


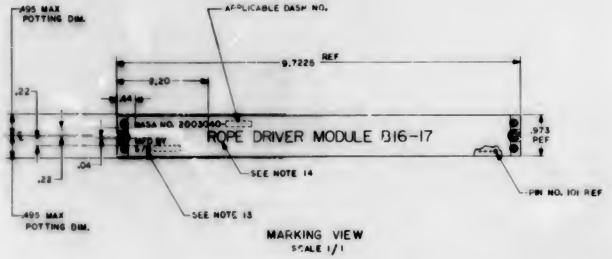
FT1 THRU FT 21, TYP
SEE NOTE 11
SEE NOTE 19
SEE NOTE 18
APPLICABLE DASH NO.
.495 MAX POTTING DIM.
9.7226 REF
2.20
.44
.22
.04
.973 REF
NASA NO. 2003040-
MFD BY
ROPE DRIVER MODULE B16-17
SEE NOTE 14
SEE NOTE 13
P/N NO. 101 REF
MARKING VIEW
SCALE 1/1

2003040 C

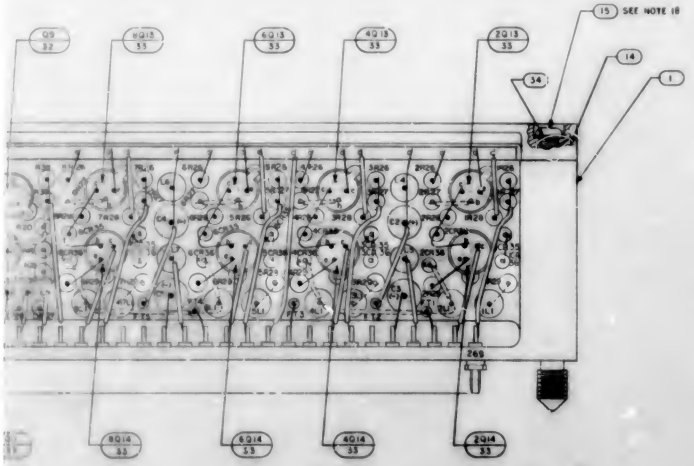
REVISIONS					
LTR	DESCRIPTION	DATE	APPROVED		
A	REVISED PER TDRR 21342				
B	REVISED PER TDRR 22268				
C	REVISED PER TDRR 24004				







MARKING VIEW
SCALE 1/1



2005000	SCHEMATIC	REF
4	NAS620C-2	WASHER, FLAT	34
39	2004004-001	TRANSISTOR, POTTED	33
8	2004104-002	TRANSISTOR, POTTED	32
66	2004114-001	DIODE	31
9	1010466-7	COIL, RF, CHOKE	30
16	1010406-8	COIL, RF, CHOKE	29
8	1006755-75	CAPACITOR	28
1	1006755-69	CAPACITOR	27
4	1004788-7	RESISTOR	26
4	1006750-13	RESISTOR	25
21	1006750-49	RESISTOR	24
6	SEE NOTE 11	RESISTOR	23
6	SEE NOTE 11	RESISTOR	22
8	1006750-22	RESISTOR	21
1	1006750-45	RESISTOR	20
22	1006750-15	RESISTOR	19
9	1006750-39	RESISTOR	18
6	1006750-35	RESISTOR	17
4	1006750-29	RESISTOR	16
4	1006783-10	SCREW, BUTTON HEAD, HEX SOCKET	15
1	2004032	COVER	14
1	2003042-011	MATRIX ASSEMBLY	13
1	2004039	TERMINAL, THREADED	12
A R	1006776-22	INSULATION, SLEEVING	11
A R	1006776-21	INSULATION, SLEEVING	10
A R	1006757-1	WIRE, ELECTRICAL	9
A R	1006757-8	WIRE, ELECTRICAL	8
2	MS16633-4015	RING, RETAINING, EXTERNAL	7
5	2004246-5	WASHER, FLAT	6
2	1004246-1	WASHER, FLAT	5
2	1004579-1	SCREW, JACKING	4
1	2004075-011	INSULATOR (B) ASSY	3
1	2004068	INSULATOR (A)	2
1	2003039-011	HEATER HOUSING ASSEMBLY	1
QTY REQ	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	CODE NO

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN uf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS ± ; DECIMALS ± ; ANGLES ± DO NOT SCALE THIS DRAWING	MATERIAL	NEXT ASSY	USED ON APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

ROPE DRIVER MODULE B16-17 ASSEMBLY

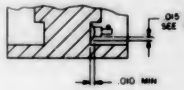
CAGE CODE	SIZE	DRAWING NO.
80230	J	2003040

SCALE 4/1 SHEET 1 OF 1

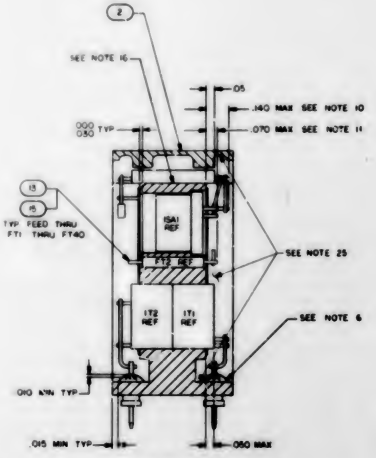
2003040 C

R9, R10	
PART NO.	VALUE
1006750 -25	510
-26	560
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1K
-33	1.1K
-34	2K
-35	1.5K
-36	1.6K
-37	1.8K
-38	2K
-39	2.2K
-40	2.4K
-41	2.7K
-42	3K
-43	3.3K
-44	3.6K
-45	3.9K
-46	4.3K
-47	4.7K
-48	5.1K
-16	220
-17	240
-18	270
-19	300
-20	330
-21	360
-22	390
-23	430
1006750 -24	470

R23, R27, R32	
PART NO.	VALUE
1006750 -52	1K
-53	1.1K
-54	1.2K
-55	1.3K
-56	1.5K
-57	1.6K
-58	1.8K
-59	2K
-60	2.2K
-61	2.4K
-62	2.7K
-63	3.0K
-64	3.3K
-65	3.6K
-66	3.9K
-67	4.3K
-68	4.7K
-69	5.1K
-119	4K
-121	1.7K
-122	1.9K
-123	2.1K
-124	2.3K
-125	2.55K
-126	2.85K
-127	3.15K
-128	3.45K
-129	3.75K
1006750-130	4.1K

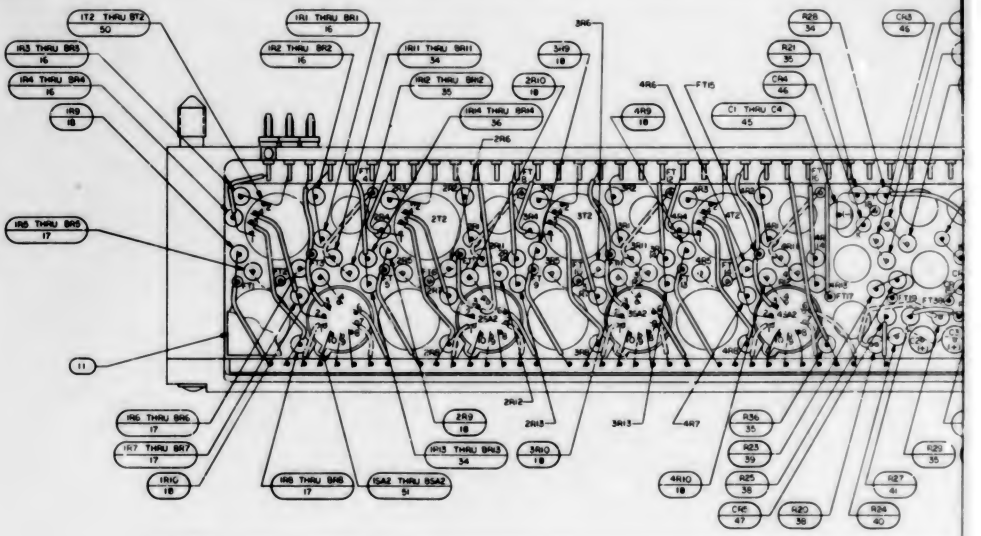


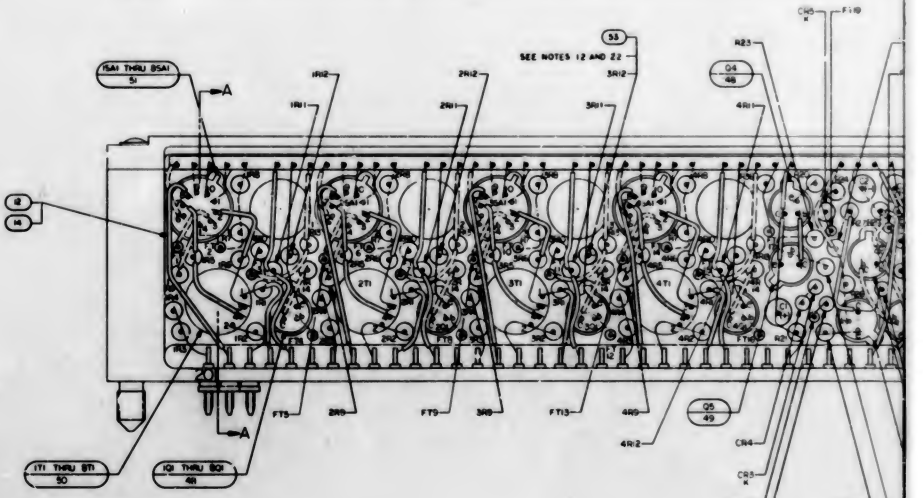
SECTION B-B

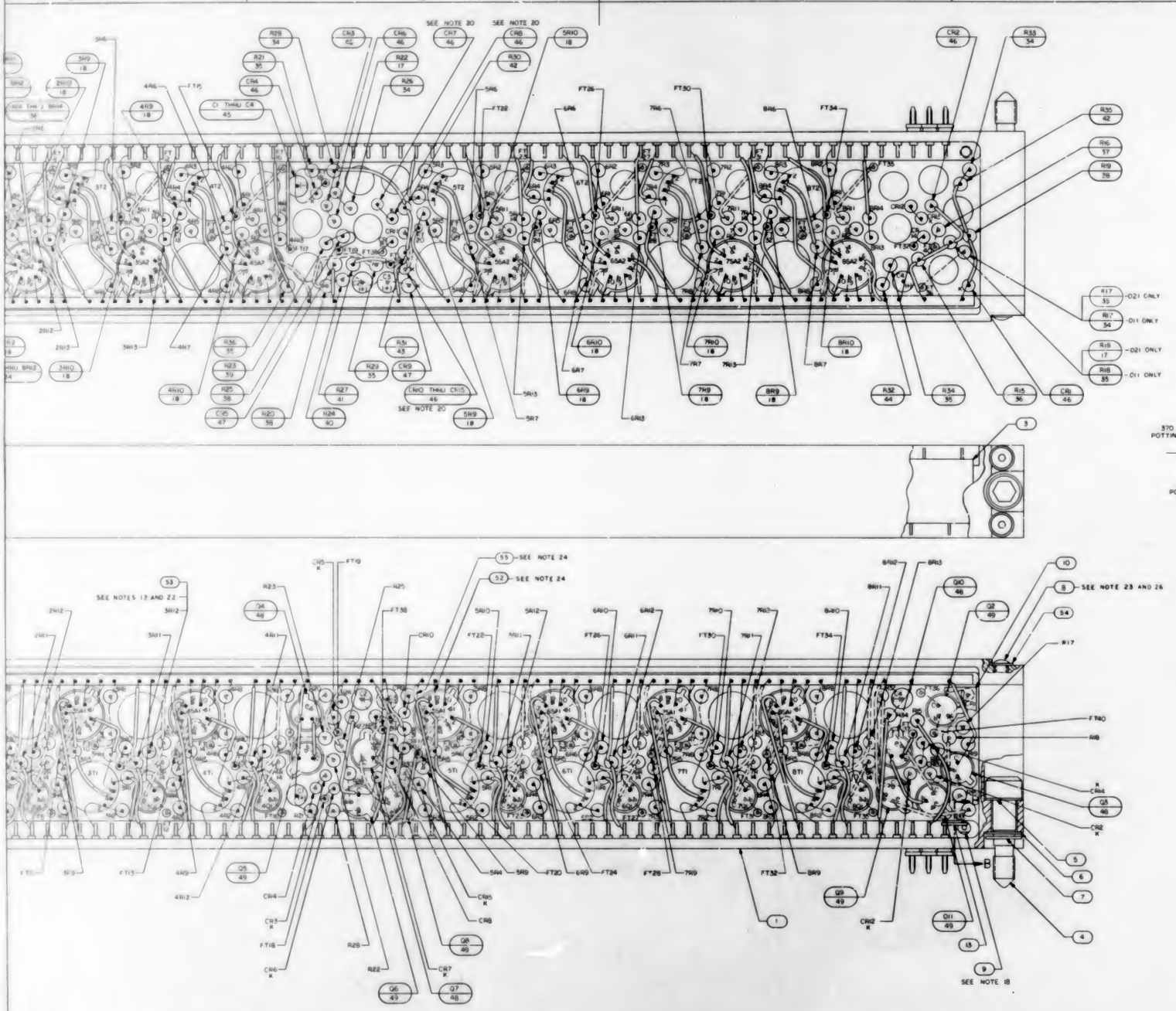


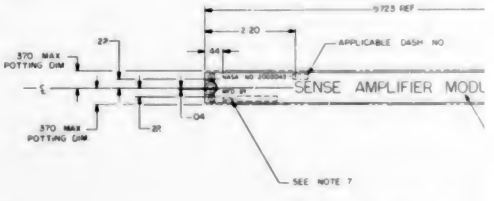
SECTION A-A

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. (+) DENOTES POSITIVE SIDE OF CAPACITOR
5. + DENOTES CATHODE SIDE OF DIODE
6. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE III
7. MARK 10/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002013 USING INK 1006271-1
8. MARK 26/24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2, USING INK 1006271-1
9. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
10. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
11. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
14. SELECT R9, R10, R23, R27 AND R32 PER APPLICABLE PS FROM APPROPRIATE CHART
15. TAKE FIND NO 16 THRU FIND NO 51 TO FIND NO 1 PER ND1002009 METHOD C OR D
16. ENCAPSULATE PER ND1002002 REMOVE FLASHING
17. WELD PER ND1002005
18. BOND FIND NO 5 TO FIND NO 1 PER ND1002004 TYPE I
19. TRIM UNUSED LEAD OF FIND NO 51 .010-.030 FROM CASE
20. MOUNTING TORQUE FOR FIND NO 9 TO BE 15-20 INCH OUNCES
21. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003043
22. CR7, 8, 15 AND CR2, 13, 14 ARE TO BE SELECTED BY ELECTRICAL TEST ONE, TWO OR THREE DIODES WILL BE SELECTED IN EACH AREA. IF LESS THAN THREE DIODES ARE REQUIRED FIND NOS. 13 AND 15 WILL BE USED IN THE REMAINING COMPONENT HOLES AND WIRING WILL BE COMPLETED AS SHOWN
23. SEAL FIND NO 9 TO HEADER PER ND1002004, TYPE III
24. ASSEMBLE FIND NO. 53 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
25. MOUNTING TORQUE FOR FIND NO. 8 TO BE 2.0-2.5 INCH POUNDS
26. USE FIND NO. 52 & FIND NO. 55 WHERE APPLICABLE ON ALL FIRST LEVEL WIRING TO THE MATRIX
27. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002197, TYPE II
28. APPLY MIL-S-22473, GRADE HV TO FIND NO. 8



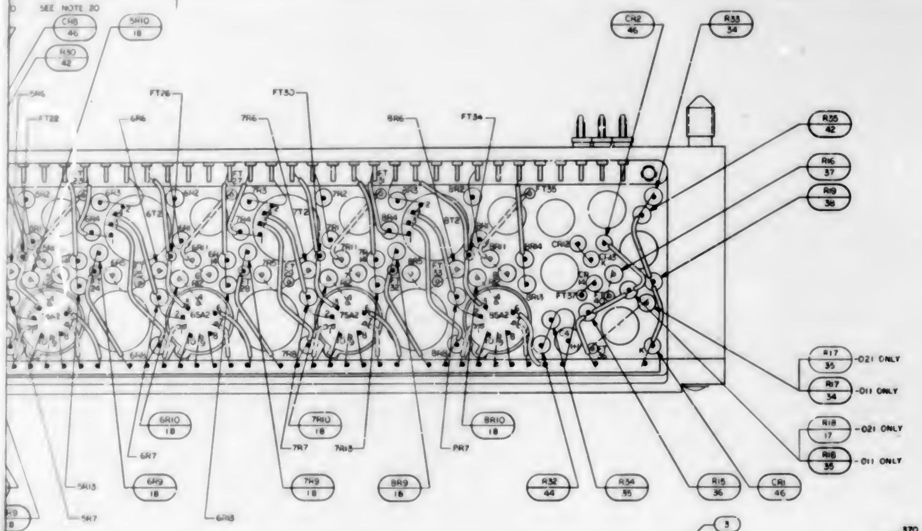


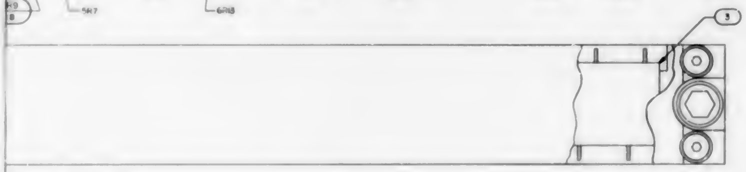


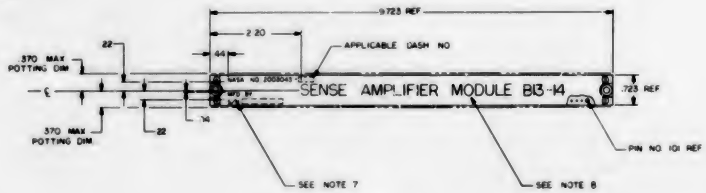


MARKING VIEW
SCALE 1/1

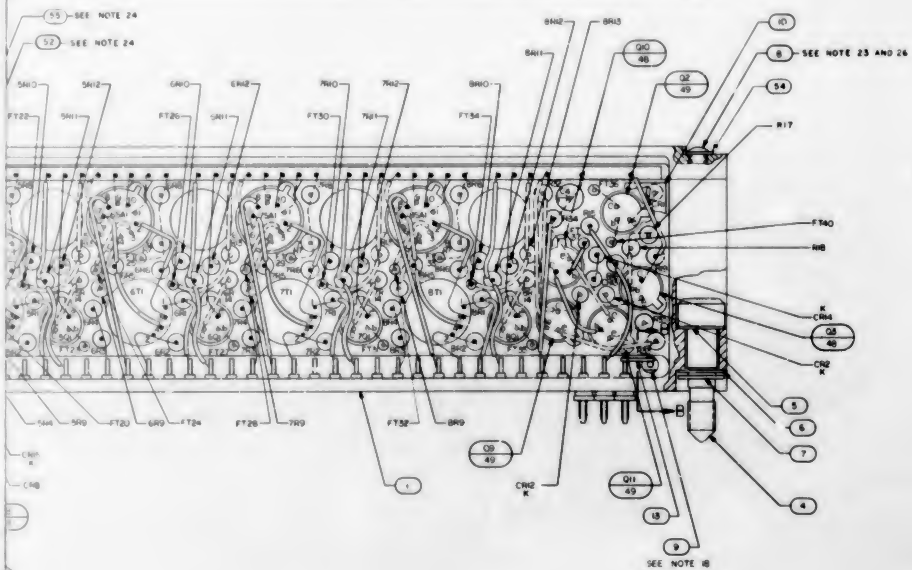
REV	ZONE	DESCRIPTION				
A		REVISED PER TDRR 20042				
B		REVISED PER TDRR 22147				
C		REVISED PER TDRR 23 41				
D		REVISED PER TDRR 23980				
E		REVISED PER TDRR 24496				







MARKING VIEW
SCALE 1/1



QTY REQD	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
X	—	2005914	SCHEMATIC	REF
—	X	2005002	SCHEMATIC	REF
AR	AR	1006776-25	ISULATION SLEEVING	55
4	4	NAS620C2	WASHER, FLAT	54
19	19	2004074	WASHER, INSULATOR	53
AR	AR	1006757-12	WIRE, ELECTRICAL	52
16	16	2004003-001	INTEGRATED SENSE AMPL	51
16	16	1006293	TRANSFORMER	50
6	6	2004004-001	TRANSISTOR, POTTED	49
12	12	2004004-002	TRANSISTOR, POTTED	48
2	2	2004112-002	DIODE	47
13	13	2004103	DIODE	46
4	4	1006755-69	CAPACITOR	45
1	1	SEE NOTE 12	RESISTOR	44
1	1	1006750-43	RESISTOR	43
2	2	1006750-12	RESISTOR	42
1	1	SEE NOTE 12	RESISTOR	41
1	1	1006750-25	RESISTOR	40
1	1	SEE NOTE 12	RESISTOR	39
3	3	1006750-36	RESISTOR	38
1	1	1006750-15	RESISTOR	37
9	9	1006750-41	RESISTOR	36
13	13	1006750-39	RESISTOR	35
19	20	1006750-32	RESISTOR	34
—	1	SEE NOTE 12	RESISTOR	33
—	1	SEE NOTE 12	RESISTOR	32
—	1	SEE NOTE 12	RESISTOR	31
—	1	SEE NOTE 12	RESISTOR	30
—	1	SEE NOTE 12	RESISTOR	29
—	1	SEE NOTE 12	RESISTOR	28
—	1	SEE NOTE 12	RESISTOR	27
—	1	SEE NOTE 12	RESISTOR	26
—	1	SEE NOTE 12	RESISTOR	25
—	1	SEE NOTE 12	RESISTOR	24
—	1	SEE NOTE 12	RESISTOR	23
—	1	SEE NOTE 12	RESISTOR	22
—	1	SEE NOTE 12	RESISTOR	21
—	1	SEE NOTE 12	RESISTOR	20
—	1	SEE NOTE 12	RESISTOR	19
16	16	SEE NOTE 12 & 22	RESISTOR	18
34	33	1006750-24	RESISTOR	17
32	32	1006750-42	RESISTOR	16
AR	AR	1006776-22	INSULATION, SLEEVING	15
AR	AR	1006776-21	INSULATION, SLEEVING	14
AR	AR	1006757-8	WIRE, ELECTRICAL	13
AR	AR	1006757-1	WIRE, ELECTRICAL	12
1	1	2004091	INSULATOR B	11
1	1	2004090-011	INSULATOR A	10
1	1	2004039	TERMINAL, THREADED	9
4	4	1006783-10	SCREW, BUTTON HEAD	8
2	2	MS16633-4015	RING, RETAINING, EXTERNAL E	7
2	2	1004546-3	WASHER, FLAT	6
2	2	1004546-1	WASHER, FLAT	5
2	2	1004579-1	SCREW, JACKING	4
1	1	2003005-011	MATRIX ASSY	3
1	1	2004044	COVER	2
1	1	2003044-011	HEADER HOUSING ASSY	1
-021	-011		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES ON DECIMALS ±.02

2003100

NEXT ASSY | USED ON

APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SENSE AMPLIFIER MODULE B13-14 ASSEMBLY

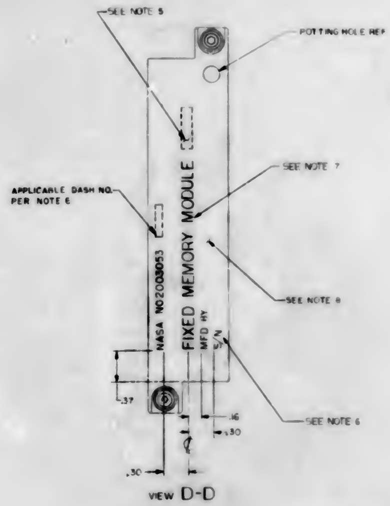
CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003043

SCALE 4/1

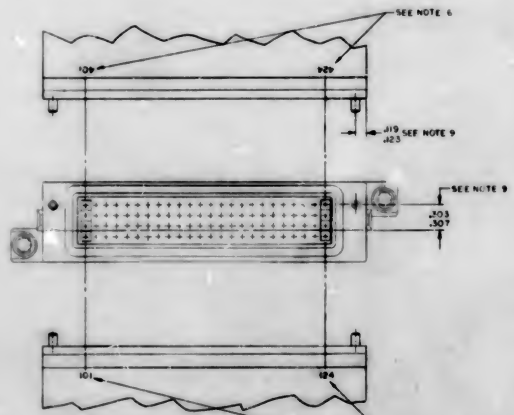
2003043 | E

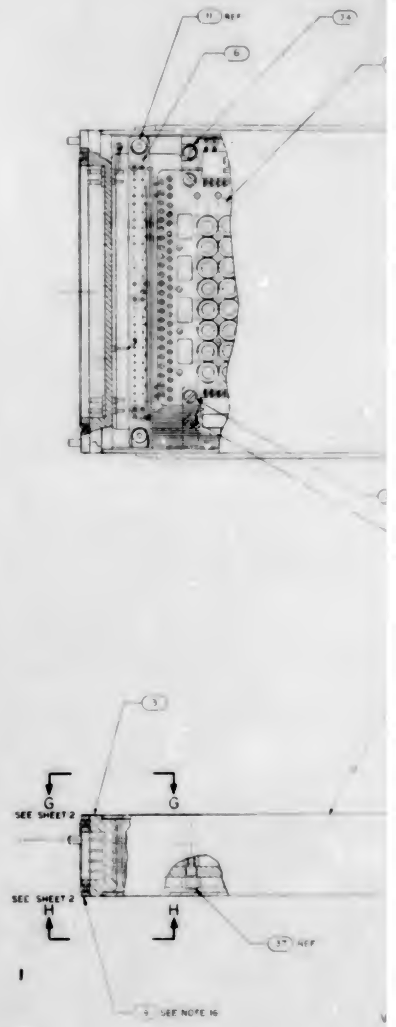
E 3/3

[illegible] NO.	MODULE NO.	FIND NO. 1	FIND NO. 2	MODULE DECK NO.	NEXT ASSEMBLY NO.
[illegible]	B1	2003060-011	2003061-011	0200	2021100
[illegible]	B2	2003060-021	2003061-021	0201	2021100
2003053-031	B1	2003060-031	2003061-031	0202	2021103
2003053-041	B2	2003060-041	2003061-041	0203	2021103
[illegible]	B1	2003060-051	2003061-051	0204	2021102
[illegible]	B1	[illegible]	2003061-061	0205	2021101
[illegible]	B2	[illegible]	2003061-071	0206	2021101
[illegible]	B3	[illegible]	2003061-081	0207	2021101
[illegible]	B	2003060-091	2003061-091	0208	2021105
[illegible]	B2	2003060-111	2003061-111	0209	2021105
[illegible]	B1	2003060-121	2003061-121	0210	2021104
[illegible]	B2	2003060-131	2003061-131	0211	2021104
[illegible]	B3	2003060-141	2003061-141	0212	2021104
[illegible]	B2	2003060-151	2003061-151	0213	2021104
[illegible]	B2	2003060-161	2003061-161	0214	2021104



VIEW D-D





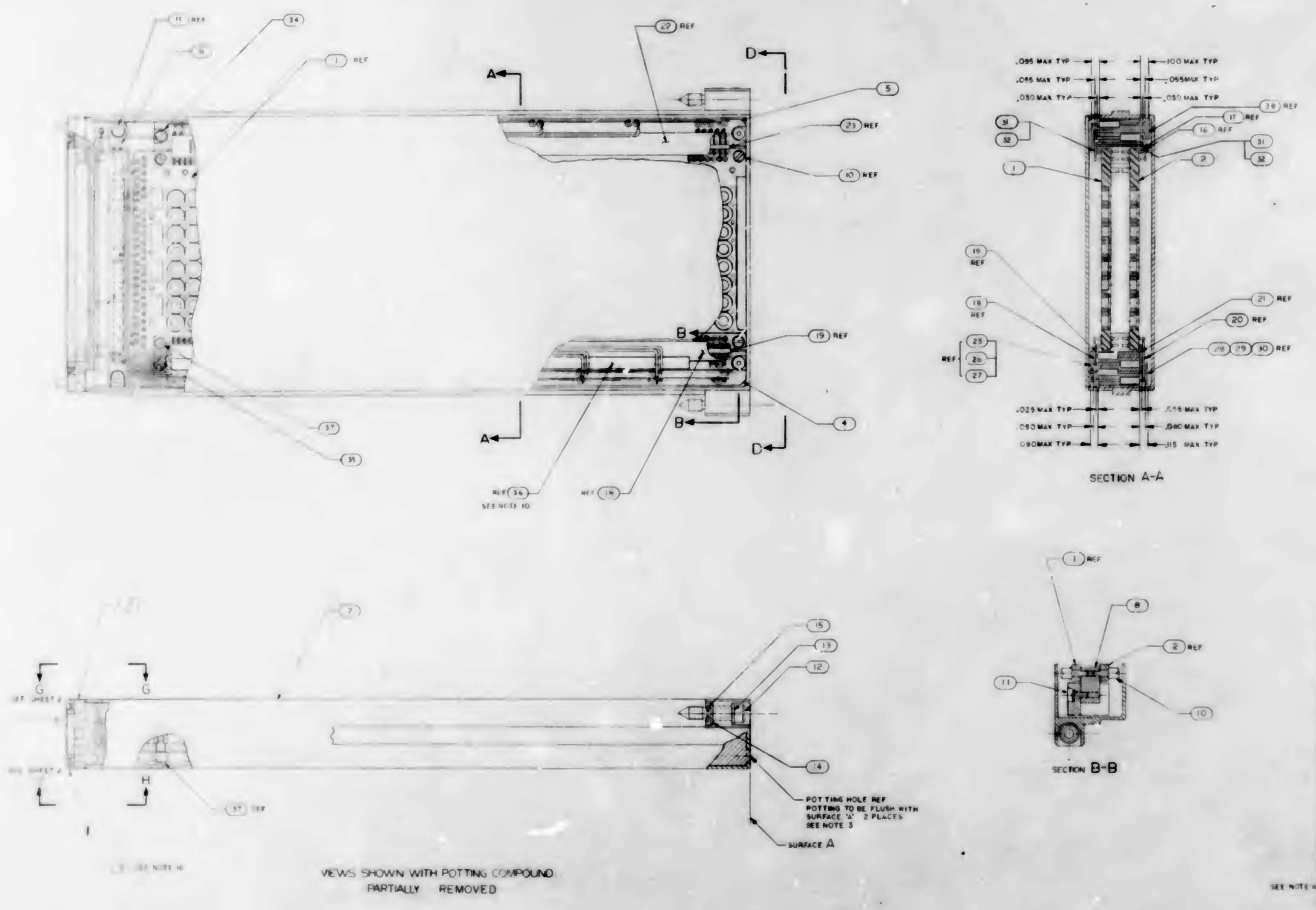
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
3. ENCAPSULATE MODULE PER ND1002226 METHOD II
4. WELD PER ND1002005
5. MARK APPROPRIATE MODULE NO. AS SHOWN IN CHART
6. MARK .08-.06 HIGH PER ND[illegible] AND ND1002122 TYPE II CLASS 2 AND SERIALIZE PER ND 1002023 USING INK 1006271-1
7. MARK .24-.20 HIGH PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING INK 1006271-1
8. PAINT INDICATED SURFACES OF FIND NO 7, PER ND1002[illegible] WITH SCD NO. 1008809-1 DARK GREY EPOXY RESIN ENAMEL, FINAL COAT PER ND1002277 USING 1001254[illegible]-003
9. ASSEMBLE FIND NO. 7 AND FIND NO. 3 TO DIMENSIONS SHOWN
10. [illegible] FIND NO. 36 AND ASSEMBLE 3 PLACES AS SHOWN. [illegible] INSULATE [illegible] FROM TRIMMED COMPONENT LEADS. TRIM AS REQUIRED
11. [illegible] DENOTES FIRST LEVEL WIRING UNLESS OTHERWISE SPECIFIED
12. [illegible] DENOTES SECOND LEVEL WIRING
13. [illegible] DENOTES THIRD LEVEL WIRING
14. ALL LEADS FROM FIND NO. 1 AND FIND NO. 2 TO FIND NO. 3 TO BE THIRD LEVEL WIRING
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003053
16. FIND NO. 38 TO BE SHIPPED UNASSEMBLED AND IDENTIFIED PER ND 1002019
17. SEAL PINS AND INSULATORS TO FIND NO. 3 PER ND1002004 TYPE III BEFORE ASSY OF FIND NO. 6

REFERENCES:
1. PROCESS REQUIREMENTS FOR CONTROL AND INSPECTION OF ROPE MEMORY ASSEMBLIES ND1002285
2. FIXED MEMORY FIXTURE DWG. NO. AP22500

SH 1 / 3

2003053 N

REV	REVISIONS DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 20061	[illegible]	[illegible]
B	REVISED PER TDRR 21340	[illegible]	[illegible]
C	REVISED PER TDRR 22468	[illegible]	[illegible]
D	REVISED PER TDRR 23539	[illegible]	[illegible]
E	REVISED PER TDRR 24802 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
F	REVISED PER TDRR 25009 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
G	REVISED PER TDRR 26870 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
H	RELEASED PER TDRR 26874 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
J	REVISED PER TDRR 28024 DR. [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
K	REVISED PER TDRR 28620 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
L	REVISED PER TDRR 28624 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
M	REVISED PER TDRR 28663 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]
N	REVISED PER TDRR 29741 DR [illegible] CHK [illegible] APPD	[illegible]	[illegible]



FOR APPLICABLE PART NO. SEE CHART

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	2003012	SCHEMATIC	REF
1	2004716	FLAT CABLE	38
4	[illegible]	SCREW, SHOULDERED	37
AR	[illegible]	INSULATION TAPE, ELECTRICAL	36
1	[illegible]	SCREW, SHOULDERED	35
1	2004150 - 002	SCREW, SHOULDERED	34
1	2004129	FLAT CABLE INTERCONNECTION	33
AR	[illegible]	SLEEVING	32
AR	[illegible]	WIRE, ELECTRICAL	31
1	[illegible]	FLAT CABLE	30
1	[illegible]	FLAT CABLE	29
1	2004124	FLAT CABLE	28
1	2004123	FLAT CABLE	27
1	2004121	FLAT CABLE	26
1	2004120	FLAT CABLE	25
1	2004119	FLAT CABLE	24
1	2003051 - [illegible]	MATRIX ASSY	23
1	2003051 - [illegible]	MATRIX ASSY	22
8	2003051 - [illegible]	MATRIX ASSY	21
8	2003051 - [illegible]	MATRIX ASSY	20
1	2003051 - 017	MATRIX ASSY	19
1	2003051 - 016	MATRIX ASSY	18
1	2003051 - 011	MATRIX ASSY	17
1	2003051 - 012	MATRIX ASSY	16
[illegible]	[illegible]	"E" RING	15
[illegible]	[illegible]	WASHER	14
[illegible]	[illegible]	WASHER	13
2	[illegible]	SCREW, JACKING	12
4	[illegible]	SCREW, BUTTONHEAD	11
4	[illegible]	SCREW, STANDOFF	10
1	[illegible]	GASKET PLATE	9
2	[illegible]	STANDOFF	8
1	[illegible]	HOUSING	7
1	2003049-011	[illegible]	6
1	2003052-011	[illegible]	5
1	2003045-011	[illegible]	4
1	[illegible]	CONNECTOR PLATE ASSY	3
1	2003061-SEE CHART	[illegible]	2
1	2003060-SEE CHART	[illegible]	1

SEE NOTE 16

LIST OF MATERIALS

MANNED SPACECRAFT CENTER

HOUSTON, TEXAS

MIT INSTRUMENTATION LAB

FIXED MEMORY MODULE ASSEMBLY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003053

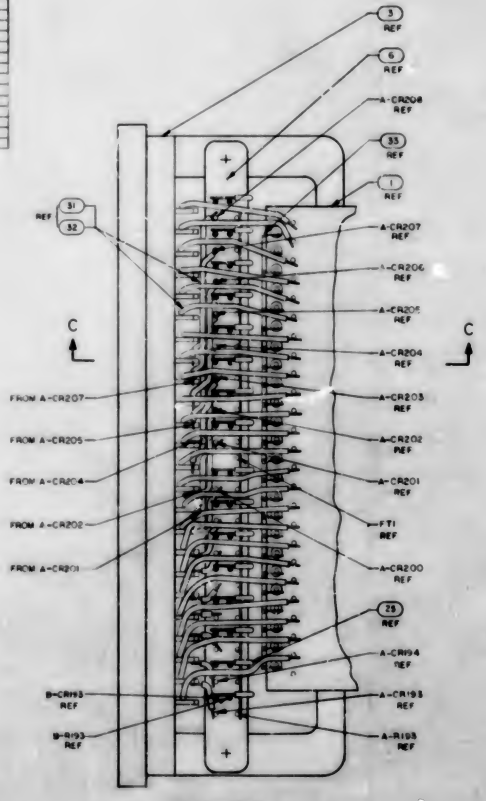
SCALE 2/1

SEE CHART

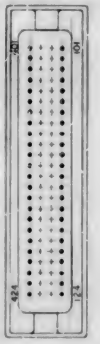
2003053 N

WIRE LIST			
PIN NO.	COMPONENT OR TERM. NO.	PIN NO.	COMPONENT OR TERM. NO.
1	A-E1-214	51	GROUND
2	A-E1-212	52	R84
3	A-E1-211	53	R64
4	A-E1-211	54	R96
105	A-E1-210	105	R-108
106	A-E1-209	106	R-160
107	E1-208	107	R192
108	E1-207	108	A-CR208
109	E1-206	109	A-CR207
110	E1-205	110	A-CR206
111	E1-204	111	A-R205
112	E1-203	112	A-CR204
113	E1-202	113	A-CR203
114	E1-201	114	A-CR202
115	E1-200	115	A-R201
116	E1-199	116	E-200
117	E1-198	117	E-199
118	E1-197	118	A-CR198
119	E1-196	119	A-R197
120	A-E1-195	120	A-CR196
121	A-E0-194	121	A-CR193
122	A-E1-194	122	A-CR194
123	A-E0-193	123	A-CR193
124	A-E1-193	124	SPARE
201	B-R-108	401	B-E1-212
202	R-197	402	B-E1-212
203	R154	403	B-E1-211
204	R152	404	B-E0-211
205	R83	405	B-E1-210
206	R48	406	B-E1-209
207	R64	407	B-E1-208
208	B-R208	408	B-E1-207
209	B-R207	409	B-E1-206
210	B-R206	410	B-E1-205
211	B-R205	411	B-E1-204
212	B-R204	412	B-E1-203
213	B-R203	413	B-E1-202
214	B-R202	414	B-E1-201
215	B-R201	415	B-E1-200
216	B-CR200	416	B-E1-199
217	B-R197	417	B-E1-198
218	B-R196	418	B-E1-197
219	B-R195	419	B-E1-196
220	B-R194	420	B-E1-195
221	B-R193	421	B-E0-194
222	B-E1-194	422	B-E1-194
223	B-CR192	423	B-E0-193
224	SPARE	424	B-E1-193

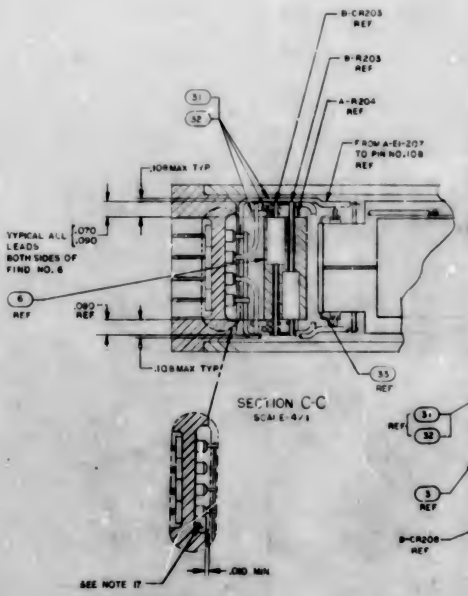
WIRE LIST	
TERMINAL NO.	TERMINAL NO.
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
A-E0-195	B-E0-195
A-E0-196	B-E0-196
A-E0-197	B-E0-197
A-E0-198	B-E0-198
A-E0-199	B-E0-199
A-E0-200	B-E0-200
A-E0-201	B-E0-201
A-E0-202	B-E0-202
A-E0-203	B-E0-203
A-E0-204	B-E0-204
A-E0-205	B-E0-205
A-E0-206	B-E0-206
A-E0-207	B-E0-207
A-E0-208	B-E0-208
A-E0-209	B-E0-209
A-E0-210	B-E0-210
SPARE	SPARE
SPARE	SPARE
A-E0-212	B-E0-212
A-E0-213	B-E0-213



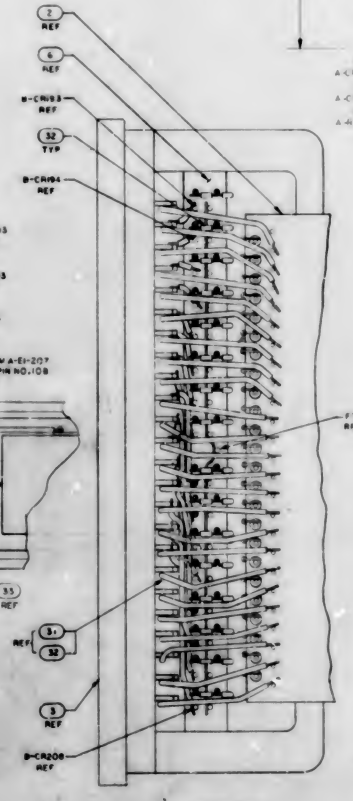
VIEW G-G
SCALE 4/1
SHOWN WITH POTTING AND FIND NO.7 REMOVED. SEE NOTES 11,12,13 AND 14



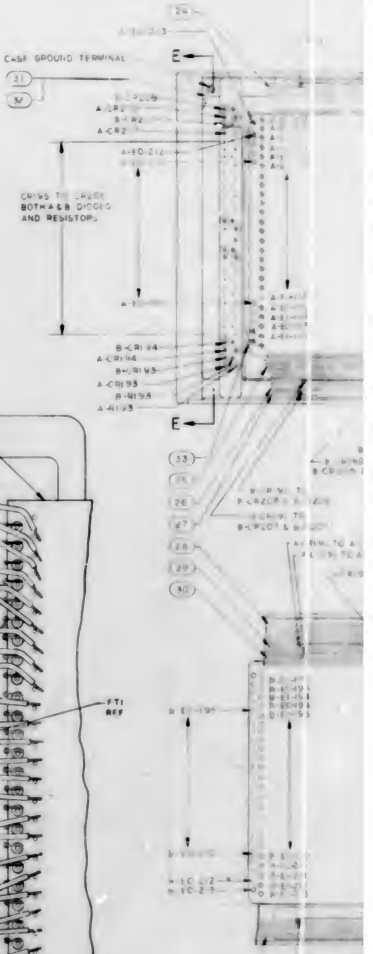
SECTION E-E



SECTION C-C
SCALE 4/1



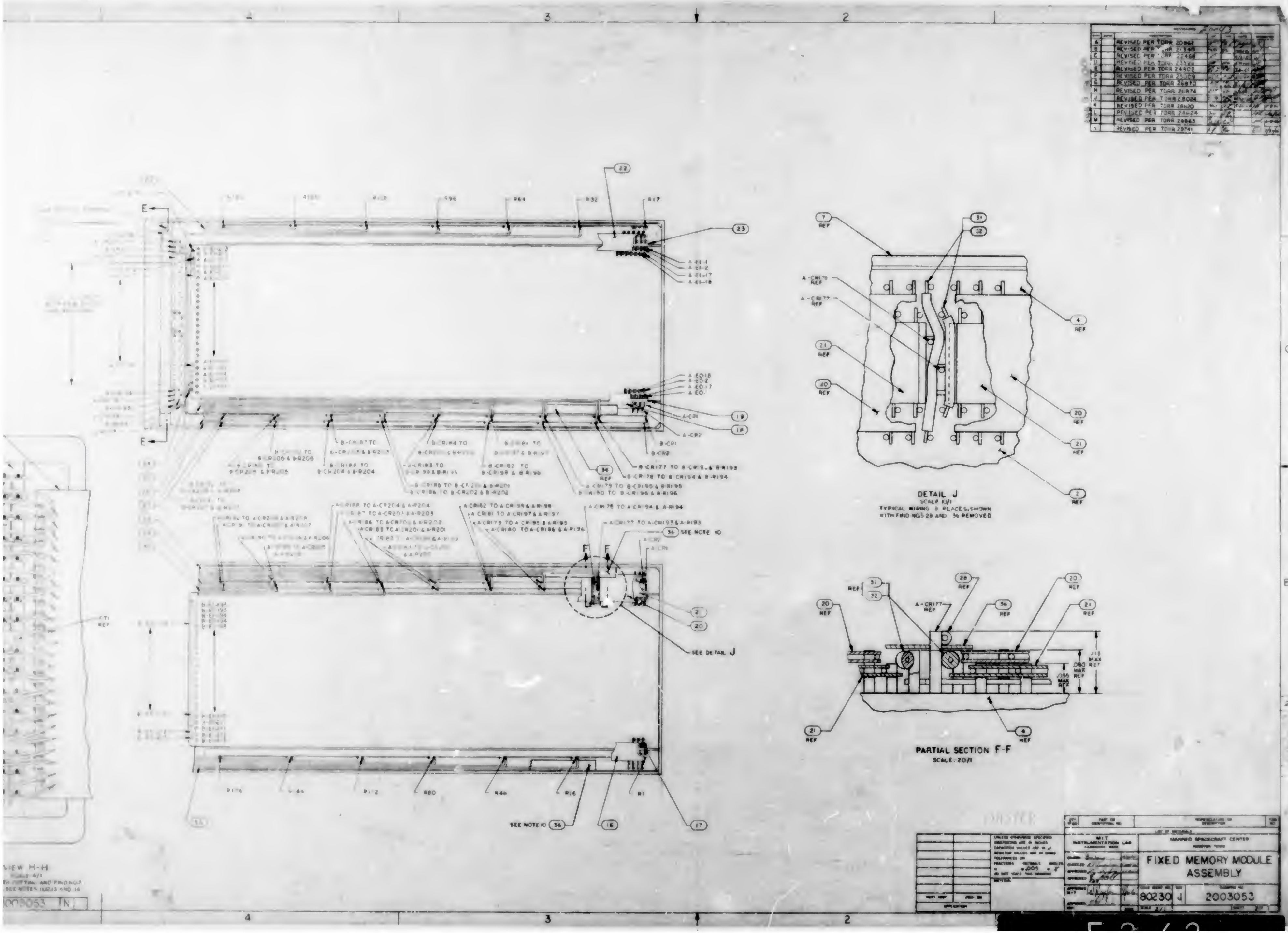
VIEW H-H
SCALE 4/1
SHOWN WITH POTTING AND FIND NO.7 REMOVED. SEE NOTES 11&13 AND 14



F-1/2

SH2/3

2003053 N


REVISED PER TDRR 20861
REVISED PER TDRR 21340
REVISED PER TDRR 22468
REVISED PER TDRR 24802
REVISED PER TDRR 26870
REVISED PER TDRR 26874
REVISED PER TDRR 28024
REVISED PER TDRR 28620
REVISED PER TDRR 28863
DETAIL J
TYPICAL WIRING 8 PLACES, SHOWN
WITH FIND NOS 28 AND 36 REMOVED
PARTIAL SECTION F-F
SCALE: 20/1
SEE DETAIL J
SEE NOTE 10
REF
VIEW H-H
MIT
INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
FIXED MEMORY MODULE
ASSEMBLY
80230
J
2003053

F-1/2

SH 3/3

20C3053 N

SYM	ZONE	DESCRIPTION
A		REVISED PER TDRR 20861
B		REVISED PER TDRR 21340
C		REVISED PER TDRR 22468
D		REVISED PER TDRR 23599
E		REVISED PER TDRR 24802
F		REVISED PER TDRR 25009
G		REVISED PER TDRR 26870
H		REVISED PER TDRR 26874
J		REVISED PER TDRR 28024
K		REVISED PER TDRR 28620
L		REVISED PER TDRR 28-24
M		REVISED PER TDRR 28863
N		REVISED PER TDRR 29741

WIRE LIST

TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.
A-EO-1	A-CR1	A-EO-97	A-CR97	B-EO-1	B-CR1	B-EO-97	B-CR97	A-EI-1	R1	A-EI-49	R49	A-EI-97	R97	A-EI-145	R145
A-EO-2	A-CR2	A-EO-98	A-CR98	B-EO-2	B-CR2	B-EO-98	B-CR98	B-EI-1		B-EI-49		B-EI-97		B-EI-145	
A-EO-3	A-CR3	A-EO-99	A-CR99	B-EO-3	B-CR3	B-EO-99	B-CR99	A-EI-2	R2	A-EI-50	R50	A-EI-98	R98	A-EI-146	R146
A-EO-4	A-CR4	A-EO-100	A-CR100	B-EO-4	B-CR4	B-EO-100	B-CR100	B-EI-2		B-EI-50		B-EI-98		B-EI-146	
A-EO-5	A-CR5	A-EO-101	A-CR101	B-EO-5	B-CR5	B-EO-101	B-CR101	A-EI-3	R3	A-EI-51	R51	A-EI-99	R99	A-EI-147	R147
A-EO-6	A-CR6	A-EO-102	A-CR102	B-EO-6	B-CR6	B-EO-102	B-CR102	B-EI-3		B-EI-51		B-EI-99		B-EI-147	
A-EO-7	A-CR7	A-EO-103	A-CR103	B-EO-7	B-CR7	B-EO-103	B-CR103	A-EI-4	R4	A-EI-52	R52	A-EI-100	R100	A-EI-148	R148
A-EO-8	A-CR8	A-EO-104	A-CR104	B-EO-8	B-CR8	B-EO-104	B-CR104	B-EI-4		B-EI-52		B-EI-100		B-EI-148	
A-EO-9	A-CR9	A-EO-105	A-CR105	B-EO-9	B-CR9	B-EO-105	B-CR105	A-EI-5	R5	A-EI-53	R53	A-EI-101	R101	A-EI-149	R149
A-EO-10	A-CR10	A-EO-106	A-CR106	B-EO-10	B-CR10	B-EO-106	B-CR106	B-EI-5		B-EI-53		B-EI-101		B-EI-149	
A-EO-11	A-CR11	A-EO-107	A-CR107	B-EO-11	B-CR11	B-EO-107	B-CR107	A-EI-6	R6	A-EI-54	R54	A-EI-102	R102	A-EI-150	R150
A-EO-12	A-CR12	A-EO-108	A-CR108	B-EO-12	B-CR12	B-EO-108	B-CR108	B-EI-6		B-EI-54		B-EI-102		B-EI-150	
A-EO-13	A-CR13	A-EO-109	A-CR109	B-EO-13	B-CR13	B-EO-109	B-CR109	A-EI-7	R7	A-EI-55	R55	A-EI-103	R103	A-EI-151	R151
A-EO-14	A-CR14	A-EO-110	A-CR110	B-EO-14	B-CR14	B-EO-110	B-CR110	B-EI-7		B-EI-55		B-EI-103		B-EI-151	
A-EO-15	A-CR15	A-EO-111	A-CR111	B-EO-15	B-CR15	B-EO-111	B-CR111	A-EI-8	R8	A-EI-56	R56	A-EI-104	R104	A-EI-152	R152
A-EO-16	A-CR16	A-EO-112	A-CR112	B-EO-16	B-CR16	B-EO-112	B-CR112	B-EI-8		B-EI-56		B-EI-104		B-EI-152	
A-EO-17	A-CR17	A-EO-113	A-CR113	B-EO-17	B-CR17	B-EO-113	B-CR113	A-EI-9	R9	A-EI-57	R57	A-EI-105	R105	A-EI-153	R153
A-EO-18	A-CR18	A-EO-114	A-CR114	B-EO-18	B-CR18	B-EO-114	B-CR114	B-EI-9		B-EI-57		B-EI-105		B-EI-153	
A-EO-19	A-CR19	A-EO-115	A-CR115	B-EO-19	B-CR19	B-EO-115	B-CR115	A-EI-10	R10	A-EI-58	R58	A-EI-106	R106	A-EI-154	R154
A-EO-20	A-CR20	A-EO-116	A-CR116	B-EO-20	B-CR20	B-EO-116	B-CR116	B-EI-10		B-EI-58		B-EI-106		B-EI-154	
A-EO-21	A-CR21	A-EO-117	A-CR117	B-EO-21	B-CR21	B-EO-117	B-CR117	A-EI-11	R11	A-EI-59	R59	A-EI-107	R107	A-EI-155	R155
A-EO-22	A-CR22	A-EO-118	A-CR118	B-EO-22	B-CR22	B-EO-118	B-CR118	B-EI-11		B-EI-59		B-EI-107		B-EI-155	
A-EO-23	A-CR23	A-EO-119	A-CR119	B-EO-23	B-CR23	B-EO-119	B-CR119	A-EI-12	R12	A-EI-60	R60	A-EI-108	R108	A-EI-156	R156
A-EO-24	A-CR24	A-EO-120	A-CR120	B-EO-24	B-CR24	B-EO-120	B-CR120	B-EI-12		B-EI-60		B-EI-108		B-EI-156	
A-EO-25	A-CR25	A-EO-121	A-CR121	B-EO-25	B-CR25	B-EO-121	B-CR121	A-EI-13	R13	A-EI-61	R61	A-EI-109	R109	A-EI-157	R157
A-EO-26	A-CR26	A-EO-122	A-CR122	B-EO-26	B-CR26	B-EO-122	B-CR122	B-EI-13		B-EI-61		B-EI-109		B-EI-157	
A-EO-27	A-CR27	A-EO-123	A-CR123	B-EO-27	B-CR27	B-EO-123	B-CR123	A-EI-14	R14	A-EI-62	R62	A-EI-110	R110	A-EI-158	R158
A-EO-28	A-CR28	A-EO-124	A-CR124	B-EO-28	B-CR28	B-EO-124	B-CR124	B-EI-14		B-EI-62		B-EI-110		B-EI-158	
A-EO-29	A-CR29	A-EO-125	A-CR125	B-EO-29	B-CR29	B-EO-125	B-CR125	A-EI-15	R15	A-EI-63	R63	A-EI-111	R111	A-EI-159	R159
A-EO-30	A-CR30	A-EO-126	A-CR126	B-EO-30	B-CR30	B-EO-126	B-CR126	B-EI-15		B-EI-63		B-EI-111		B-EI-159	
A-EO-31	A-CR31	A-EO-127	A-CR127	B-EO-31	B-CR31	B-EO-127	B-CR127	A-EI-16	R16	A-EI-64	R64	A-EI-112	R112	A-EI-160	R160
A-EO-32	A-CR32	A-EO-128	A-CR128	B-EO-32	B-CR32	B-EO-128	B-CR128	B-EI-16		B-EI-64		B-EI-112		B-EI-160	
A-EO-33	A-CR33	A-EO-129	A-CR129	B-EO-33	B-CR33	B-EO-129	B-CR129	A-EI-17	R17	A-EI-65	R65	A-EI-113	R113	A-EI-161	R161
A-EO-34	A-CR34	A-EO-130	A-CR130	B-EO-34	B-CR34	B-EO-130	B-CR130	B-EI-17		B-EI-65		B-EI-113		B-EI-161	
A-EO-35	A-CR35	A-EO-131	A-CR131	B-EO-35	B-CR35	B-EO-131	B-CR131	A-EI-18	R18	A-EI-66	R66	A-EI-114	R114	A-EI-162	R162
A-EO-36	A-CR36	A-EO-132	A-CR132	B-EO-36	B-CR36	B-EO-132	B-CR132	B-EI-18		B-EI-66		B-EI-114		B-EI-162	
A-EO-37	A-CR37	A-EO-133	A-CR133	B-EO-37	B-CR37	B-EO-133	B-CR133	A-EI-19	R19	A-EI-67	R67	A-EI-115	R115	A-EI-163	R163
A-EO-38	A-CR38	A-EO-134	A-CR134	B-EO-38	B-CR38	B-EO-134	B-CR134	B-EI-19		B-EI-67		B-EI-115		B-EI-163	
A-EO-39	A-CR39	A-EO-135	A-CR135	B-EO-39	B-CR39	B-EO-135	B-CR135	A-EI-20	R20	A-EI-68	R68	A-EI-116	R116	A-EI-164	R164
A-EO-40	A-CR40	A-EO-136	A-CR136	B-EO-40	B-CR40	B-EO-136	B-CR136	B-EI-20		B-EI-68		B-EI-116		B-EI-164	
A-EO-41	A-CR41	A-EO-137	A-CR137	B-EO-41	B-CR41	B-EO-137	B-CR137	A-EI-21	R21	A-EI-69	R69	A-EI-117	R117	A-EI-165	R165
A-EO-42	A-CR42	A-EO-138	A-CR138	B-EO-42	B-CR42	B-EO-138	B-CR138	B-EI-21		B-EI-69		B-EI-117		B-EI-165	
A-EO-43	A-CR43	A-EO-139	A-CR139	B-EO-43	B-CR43	B-EO-139	B-CR139	A-EI-22	R22	A-EI-70	R70	A-EI-118	R118	A-EI-166	R166
A-EO-44	A-CR44	A-EO-140	A-CR140	B-EO-44	B-CR44	B-EO-140	B-CR140	B-EI-22		B-EI-70		B-EI-118		B-EI-166	
A-EO-45	A-CR45	A-EO-141	A-CR141	B-EO-45	B-CR45	B-EO-141	B-CR141	A-EI-23	R23	A-EI-71	R71	A-EI-119	R119	A-EI-167	R167
A-EO-46	A-CR46	A-EO-142	A-CR142	B-EO-46	B-CR46	B-EO-142	B-CR142	B-EI-23		B-EI-71		B-EI-119		B-EI-167	
A-EO-47	A-CR47	A-EO-143	A-CR143	B-EO-47	B-CR47	B-EO-143	B-CR143	A-EI-24	R24	A-EI-72	R72	A-EI-120	R120	A-EI-168	R168
A-EO-48	A-CR48	A-EO-144	A-CR144	B-EO-48	B-CR48	B-EO-144	B-CR144	B-EI-24		B-EI-72		B-EI-120		B-EI-168	
A-EO-49	A-CR49	A-EO-145	A-CR145	B-EO-49	B-CR49	B-EO-145	B-CR145	A-EI-25	R25	A-EI-73	R73	A-EI-121	R121	A-EI-169	R169
A-EO-50	A-CR50	A-EO-146	A-CR146	B-EO-50	B-CR50	B-EO-146	B-CR146	B-EI-25		B-EI-73		B-EI-121		B-EI-169	
A-EO-51	A-CR51	A-EO-147	A-CR147	B-EO-51	B-CR51	B-EO-147	B-CR147	A-EI-26	R26	A-EI-74	R74	A-EI-122	R122	A-EI-170	R170
A-EO-52	A-CR52	A-EO-148	A-CR148	B-EO-52	B-CR52	B-EO-148	B-CR148	B-EI-26		B-EI-74		B-EI-122		B-EI-170	
A-EO-53	A-CR53	A-EO-149	A-CR149	B-EO-53	B-CR53	B-EO-149	B-CR149	A-EI-27	R27	A-EI-75	R75	A-EI-123	R123	A-EI-171	R171
A-EO-54	A-CR54	A-EO-150	A-CR150	B-EO-54	B-CR54	B-EO-150	B-CR150	B-EI-27		B-EI-75		B-EI-123		B-EI-171	
A-EO-55	A-CR55	A-EO-151	A-CR151	B-EO-55	B-CR55	B-EO-151	B-CR151	A-EI-28	R28	A-EI-76	R76	A-EI-124	R124	A-EI-172	R172
A-EO-56	A-CR56	A-EO-152	A-CR152	B-EO-56	B-CR56	B-EO-152	B-CR152	B-EI-28		B-EI-76		B-EI-124		B-EI-172	
A-EO-57	A-CR57	A-EO-153	A-CR153	B-EO-57	B-CR57	B-EO-153	B-CR153	A-EI-29	R29	A-EI-77	R77	A-EI-125	R125	A-EI-173	R173
A-EO-58	A-CR58	A-EO-154	A-CR154	B-EO-58	B-CR58	B-EO-154	B-CR154	B-EI-29		B-EI-77		B-EI-125		B-EI-173	
A-EO-59	A-CR59	A-EO-155	A-CR155	B-EO-59	B-CR59	B-EO-155	B-CR155	A-EI-30	R30	A-EI-78	R78	A-EI-126	R126	A-EI-174	R174
A-EO-60	A-CR60	A-EO-156	A-CR156	B-EO-60	B-CR60	B-EO-156	B-CR156	B-EI-30		B-EI-78		B-EI-126		B-EI-174	
A-EO-61	A-CR61	A-EO-157	A-CR157	B-EO-61	B-CR61	B-EO-157	B-CR157	A-EI-31	R31	A-EI-79	R79	A-EI-127	R127	A-EI-175	R175
A-EO-62	A-CR62	A-EO-158	A-CR158	B-EO-62	B-CR62	B-EO-158	B-CR158	B-EI-31		B-EI-79		B-EI-127		B-EI-175	
A-EO-63	A-CR63	A-EO-159	A-CR159	B-EO-63	B-CR63	B-EO-159	B-CR159	A-EI-32	R32	A-EI-80	R80	A-EI-128	R128	A-EI-176	R176
A-EO-64	A-CR64	A-EO-160	A-CR160	B-EO-64	B-CR64	B-EO-160	B-CR160	B-EI-32		B-EI-80		B-EI-128		B-EI-176	
A-EO-65	A-CR65	A-EO-161	A-CR161	B-EO-65	B-CR65	B-EO-161	B-CR161	A-EI-33	R33	A-EI-81	R81	A-EI-129	R129	A-EI-177	R177
A-EO-66	A-CR66	A-EO-162	A-CR162	B-EO-66	B-CR66	B-EO-162	B-CR162	B-EI-33		B-EI-81		B-EI-129		B-EI-177	
A-EO-67	A-CR67	A-EO-163	A-CR163	B-EO-67	B-CR67	B-EO-163	B-CR163	A-EI-34	R34	A-EI-82	R82	A-EI-130	R130	A-EI-178	R178
A-EO-68	A-CR68	A-EO-164	A-CR164	B-EO-68	B-CR68	B-EO-164	B-CR164	B-EI-34		B-EI-82		B-EI-130		B-EI-178	
A-EO-69	A-CR69	A-EO-165	A-CR165	B-EO-69	B-CR69	B-EO-165	B-CR165	A-EI-35	R35	A-EI-83	R83	A-EI-131	R131	A-EI-179	R179
A-EO-70	A-CR70	A-EO-166	A-CR166	B-EO-70	B-CR70	B-EO-166	B-CR166	B-EI-35		B-EI-83		B-EI-131		B-EI-179	
A-EO-71	A-CR71	A-EO-167	A-CR167	B-EO-71	B-CR71	B-EO-167	B-CR167	A-EI-36	R36	A-EI-84	R84	A-EI-132	R132	A-EI-180	R180
A-EO-72	A-CR72	A-EO-168	A-CR168	B-EO-72	B-CR72	B-EO-168	B-CR168	B-EI-36		B-EI-84		B-EI-132		B-EI-180	
A-EO-73	A-CR73	A-EO-169	A-CR169	B-EO-73	B-CR73	B-EO-169	B-CR169	A-EI-37	R37	A-EI-85	R85	A-EI-133	R133	A-EI-181	R181
A-EO-74	A-CR74	A-EO-170	A-CR170	B-EO-74	B-CR74	B-EO-170	B-CR170	B-EI-37		B-EI-85		B-EI-133		B-EI-181	
A-EO-75	A-CR75	A-EO-171	A-CR171	B-EO-75	B-CR75	B-EO-171	B-CR171	A-EI-38	R38	A-EI-86	R86	A-EI-134	R134	A-EI-182	R182
A-EO-76	A-CR76	A-EO-172	A-CR172	B-EO-76	B-CR76	B-EO-172	B-CR172	B-EI-38		B-EI-86		B-EI-134		B-EI-182	
A-EO-77	A-CR77	A-EO-173	A-CR173	B-EO-77	B-CR77	B-EO-173	B-CR173	A-EI-39	R39	A-EI-87	R87	A-EI-135	R135	A-EI-183	R183
A-EO-78	A-CR78	A-EO-174	A-CR174	B-EO-78	B-CR78	B-EO-174	B-CR174	B-EI-39		B-EI-87		B-EI-135		B-EI-183	
A-EO-79	A-CR79	A-EO-175	A-CR175	B-EO-79	B-CR79	B-EO-175	B-CR175	A-EI-40	R40	A-EI-88	R88	A-EI-136	R136	A-EI-184	R184
A-EO-80	A-CR80	A-EO-176	A-CR176	B-EO-80	B-CR80	B-EO-176	B-CR176	B-EI-40		B-EI-88		B-EI-136		B-EI-184	
A-EO-81	A-CR81	A-EO-177	A-CR177	B-EO-81	B-CR81	B-EO-177	B-CR177	A-EI-41	R41	A-EI-89	R89	A-EI-137	R137	A-EI-185	R185
A-EO-82	A-CR82	A-EO-178	A-CR178	B-EO-82	B-CR82	B-EO-178	B-CR178	B-EI-41		B-EI-89		B-EI-137		B-EI-185	
A-EO-83	A-CR83	A-EO-179	A-CR179	B-EO-83	B-CR83	B-EO-179	B-CR179	A-EI-42	R42	A-EI-90	R90	A-EI-138	R138	A-EI-186	R186
A-EO-84	A-CR84	A-EO-180	A-CR180	B-EO-84	B-CR84	B-EO-180	B-CR180	B-EI-42		B-EI-90		B-EI-138		B-EI-186	
A-EO-85	A-CR85	A-EO-181	A-CR181	B-EO-85	B-CR85	B-EO-181	B-CR181	A-EI-43	R43	A-EI-91	R91	A-EI-139	R139	A-EI-187	R187
A-EO-86	A-CR86	A-EO-182	A-CR182	B-EO-86	B-CR86	B-EO-182	B-CR182	B-EI-43		B-EI-91		B-EI-139		B-EI-187	
A-EO-87	A-CR87	A-EO-183	A-CR183	B-EO-87	B-CR87	B-EO-183	B-CR183	A-EI-44	R44	A-EI-92	R92	A-EI-140	R140	A-EI-188	R188
A-EO-88	A-CR88	A-EO-184	A-CR184	B-EO-88	B-CR88	B-EO-184	B-CR184	B-EI-44		B-EI-92		B-EI-140		B-EI-188	
A-EO-89	A-CR89	A-EO-185	A-CR185	B-EO-89	B-CR89	B-EO-185	B-CR185	A-EI-45	R45	A-EI-93	R93	A-EI-141	R141	A-EI-189	R189
A-EO-90	A-CR90	A-EO-186	A-CR186	B-EO-90	B-CR90	B-EO-186	B-CR186	B-EI-45		B-EI-93		B-EI-141		B-EI-189	
A-EO-91	A-CR91	A-EO-187	A-CR187	B-EO-91	B-CR91	B-EO-187	B-CR187	A-EI-46	R46	A-EI-94	R94	A-EI-142	R142	A-EI-190	R190
A-EO-92	A-CR92	A-EO-188	A-CR188	B-EO-92	B-CR92	B-EO-188	B-CR188	B-EI-46		B-EI-94		B-EI-142		B-EI-190	
A-EO-93	A-CR93	A-EO-189	A-CR189	B-EO-93	B-CR93	B-EO-189	B-CR189	A-EI-47	R47	A-EI-95	R95	A-EI-143	R143	A-EI-191	R191
A-EO-94	A-CR94	A-EO-190	A-CR190	B-EO-94	B-CR94	B-EO-190	B-CR190	B-EI-47		B-EI-95		B-EI-143		B-EI-191	
A-EO-95	A-CR95	A-EO-191	A-CR191	B-EO-95	B-CR95	B-EO-191	B-CR191	A-EI-48	R48	A-EI-96	R96	A-EI-144	R144	A-EI-192	R182
A-EO-96	A-CR96	A-EO-192	A-CR192	B-EO-96	B-CR96	B-EO-192	B-CR192	B-EI-48		B-EI-96		B-EI-144		B-EI-192	

LIST OF MATERIALS

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

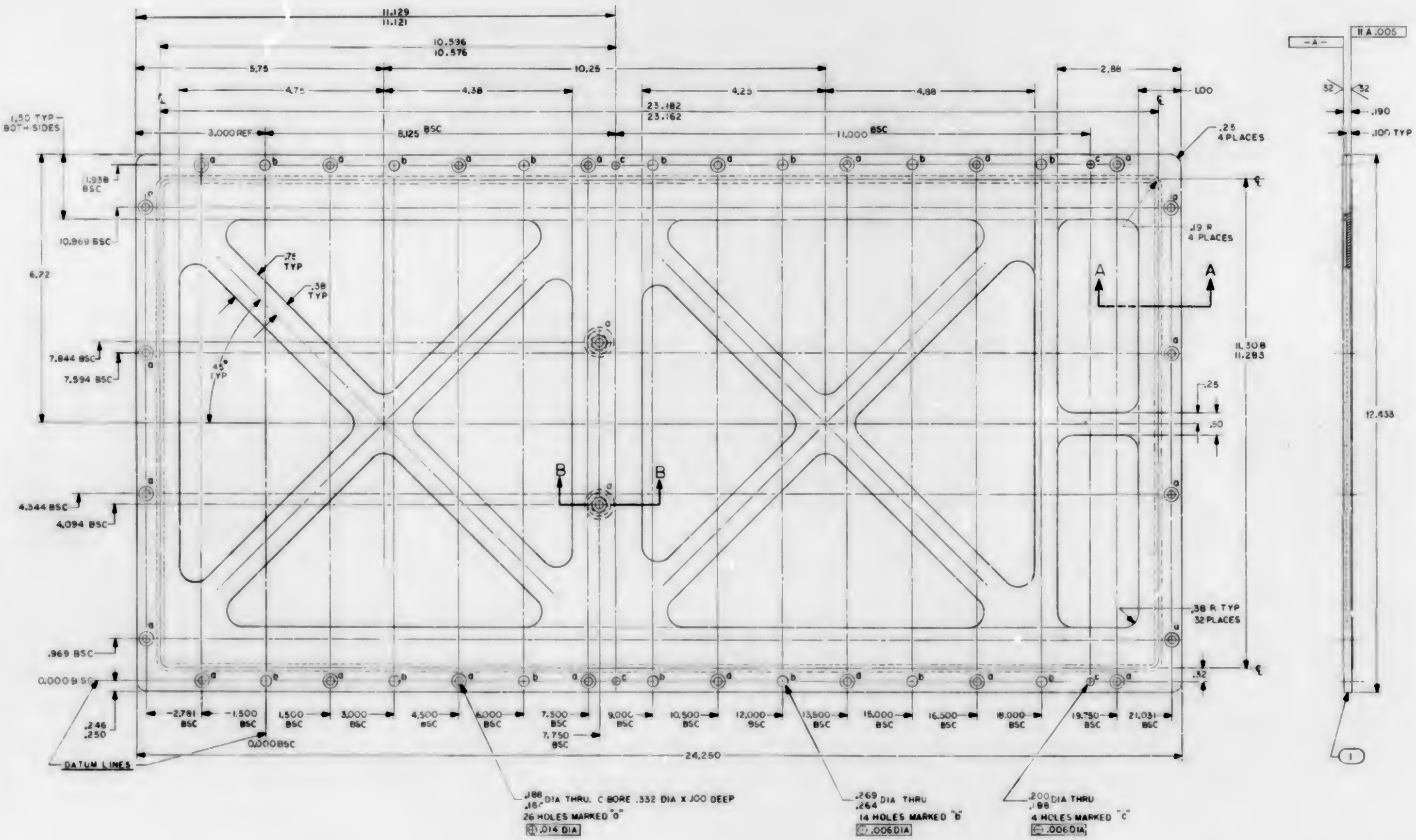
FIXED MEMORY MODULE ASSEMBLY

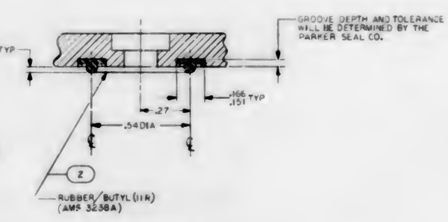
CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003053

SCALE NONE

F-2/2

2003053 N

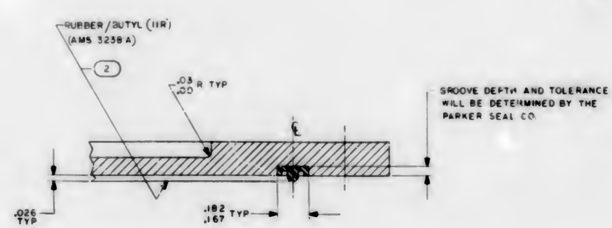




PARTIAL SECTION B-B
SCALE: NONE

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: 6061-T6-AL PER QQ-A-250/11, TEMP 6
3. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED
4. REMOVE BURRS AND SHARP EDGES .005/.015
5. FINISH: PLATE (ELECTRODEPOSITED)/QQ-C-320, CLASS 2, TYPE II, PLATING TO BE .0004-.0008 THK, HARDNESS R_C 60 MIN, DIM. APPLY AFTER PLATING.
   PLATE OR CHROMATE HOLES / MIL-C-5541, TYPE II, GRADE C, CLASS 3, OPTIONAL
6. FIND NO.2 TO BE MOLDED TO FIND NO.1 AS SHOWN
7. IDENTIFY WITH DRAWING NO. AND REVISION PER ND1002019



PARTIAL SECTION A-A
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
AR		GASK-O-SEAL	2
1	2003054-001	COVER, "A"	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003100	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± — DECIMALS .XXX ±.005 .XX ±.01 ANGLES ±1°
DO NOT SCALE THIS DRAWING

MATERIAL: NOTED

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

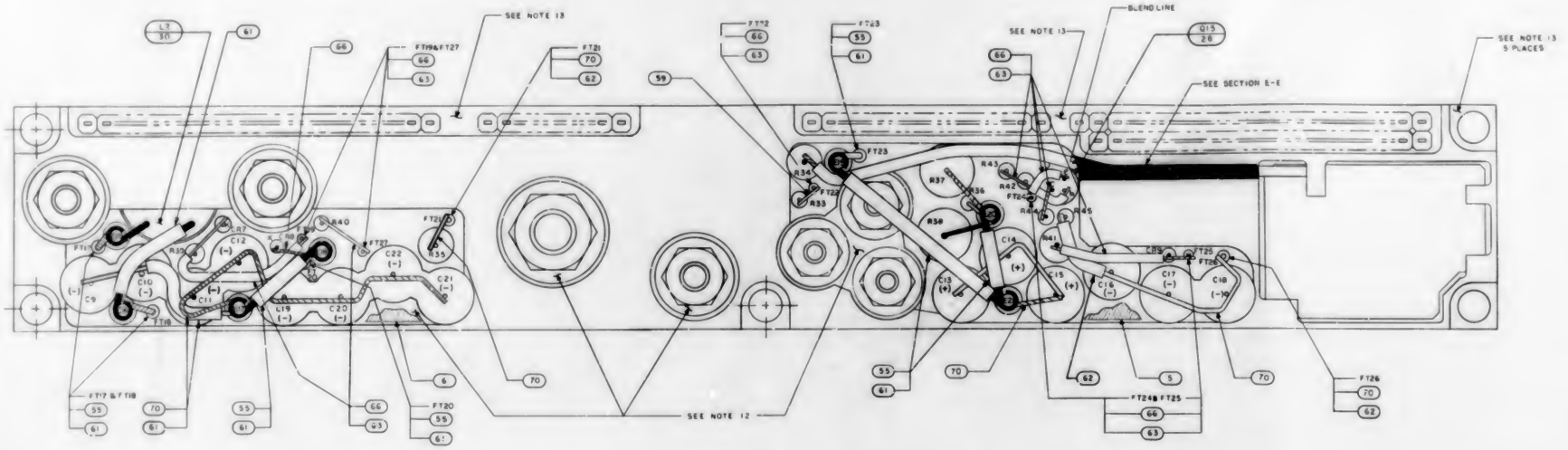
DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED MSC / DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

COVER, "A" ASSEMBLY
COMPUTER ASSEMBLY

CODE IDENT NO	SIZE	DRAWING NO
80230	E	2003054

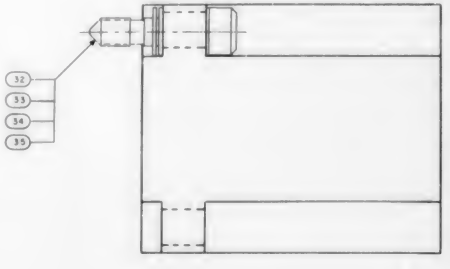
SCALE 1/1 SHEET 1 OF 1

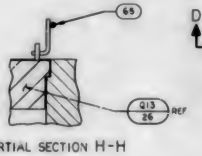


NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. WELD PER ND1002005
3. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. SOLDER PER ND1002071 USING SOLDER COMP. SN60 FORM WIRE SOLID PER ND1002075, EXCEPT AS SHOWN
5. K DENOTES CATHODE SIDE OF DIODE
6. AR DENOTES AS REQUIRED
7. APPLY SILICONE GREASE, 1006879, TO INDICATED AREAS OF CR6, CR10, Q9, Q10, Q11, Q12 & Q14
8. MOUNTING TORQUE FOR CR6 & CR10 TO BE 25/30 INCH POUNDS
9. MOUNTING TORQUE FOR Q9, Q10 & Q11 TO BE 60/70 INCH OUNCES
10. MOUNTING TORQUE FOR Q12 TO BE 15/20 INCH POUNDS
11. MOUNTING TORQUE FOR Q14 TO BE 13/15 INCH POUNDS
12. ENCAPSULATE PER ND1002002. REMOVE FLASHING
13. INDICATED AREAS TO BE FREE OF ENCAPSULATION
14. STAKE FIND NO.9 THRU 22, 2F & 28 THRU 31 PER ND1002009 METHOD C OR D
15. FT DENOTES FEED THRU
16. + DENOTES POSITIVE SIDE OF CAPACITOR
17. SEAL INSULATORS, CONTACTS AND FIND NO.64 TO HEADER PER ND1002004, TYPE XI
18. E DENOTES STAND-OFF
19. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
20. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2 USING INK 1006271-1
21. BLACK DOT & CROSS HATCHED WIRING INDICATES UPPER LEVEL WIRING
22. BLACK DOT & SOLID BLACK WIRING INDICATES SPECIAL LEVEL WIRING
23. WHITE DOT & CLEAR WIRING INDICATES LOWER LEVEL WIRING
24. MOUNTING TORQUE FOR FIND NO.64 TO BE 15/20 INCH OUNCES
25. ENCAPSULATE FIND NO.2 IN FIND NO.1 TO DIM SHOWN PER ND1002009, METHOD F
26. MOUNTING TORQUE FOR BLAND NUT OF FIND NO.38 TO BE 40/50 INCH OUNCES
27. SELECT FIND NOS 7&8 PER APPLICABLE P.S. FROM APPROPRIATE CHART
28. STAKE WIRE IN PLACE PER ND1002004, TYPE XI
29. BACKGROUND TO BE RED USING MARKING INK 1006271-9
30. MARK .10/.08 HIGH WHITE PER ND1002019 & ND1002122 TYPE II, CLASS 2, USING INK 1006271-1, CENTRALIZE AS SHOWN
31. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S.2003056
32. ENCAPSULATE FIND NO.23 TO FIND NO.1 PER ND1002009, METHOD F

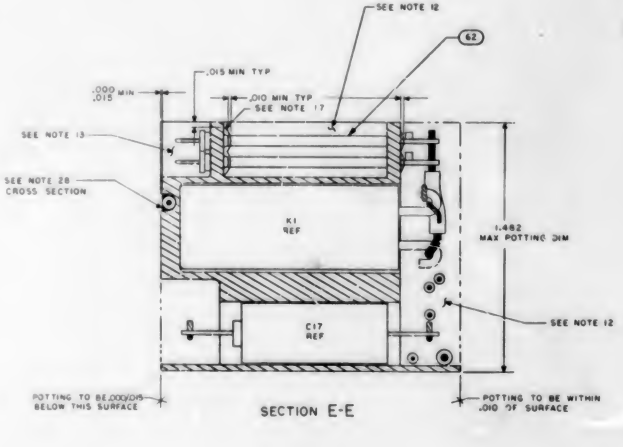
R1 & R2	
PART NO.	VALUE
1005750-1	51
-2	56
-3	62
-4	68
-5	75
-6	82
-7	91
-8	100
-9	110
-10	120
-11	130
-12	150
-13	160
-14	180
-15	200
-16	220
-17	240
-18	270
-19	300
-20	330
-21	360
-22	390
-23	430
-24	470
1006750-25	510



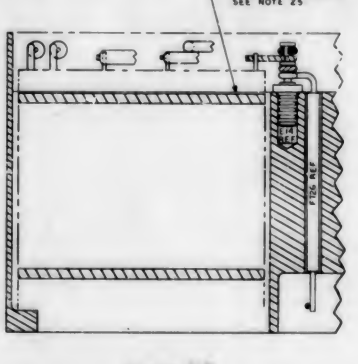


PARTIAL SECTION H-H

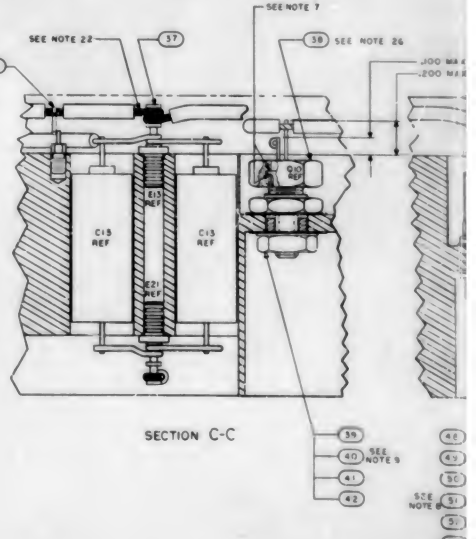
SECTION G-G



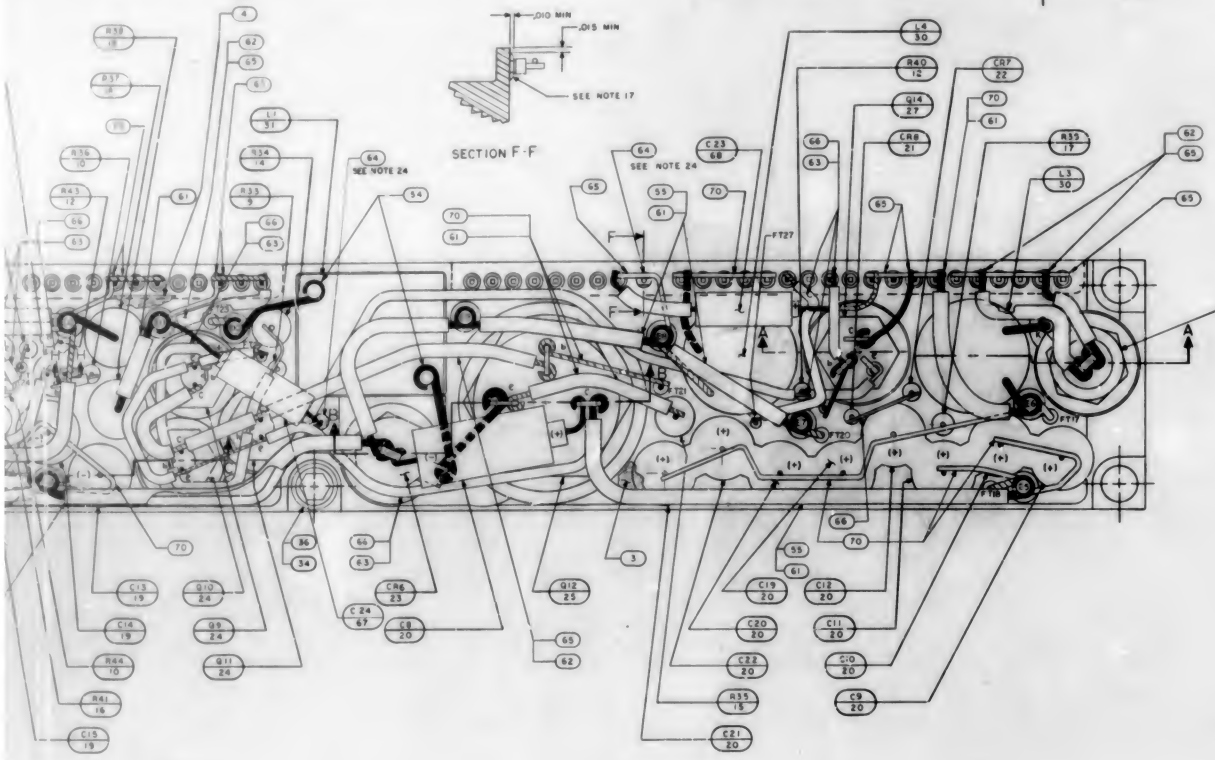
SECTION E-E

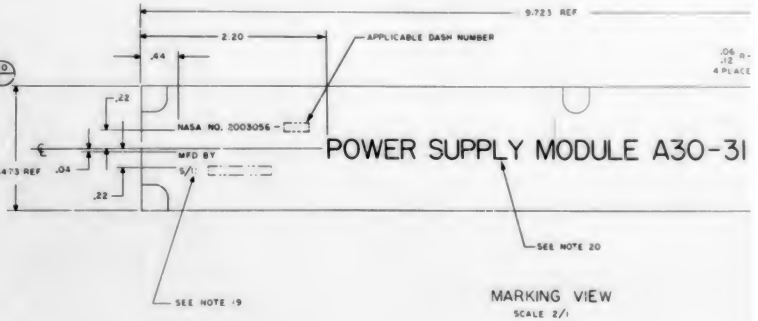


SECTION D-D



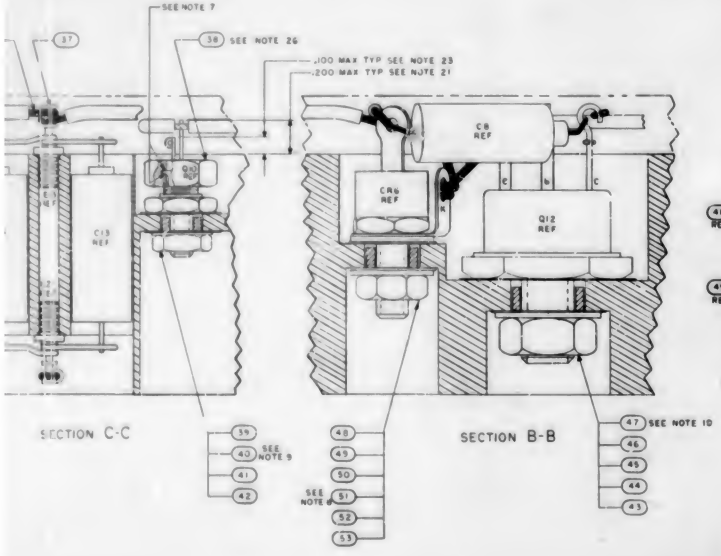
SECTION C-C

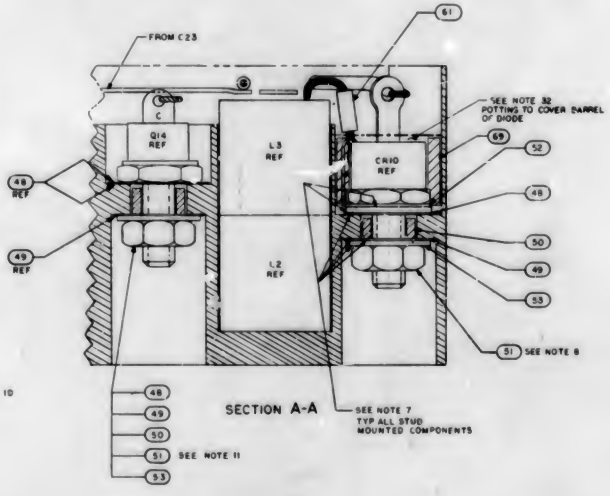




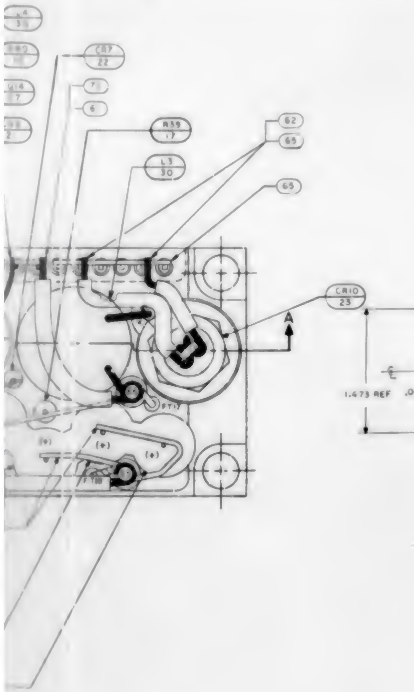
POWER SUPPLY MODULE A30-31

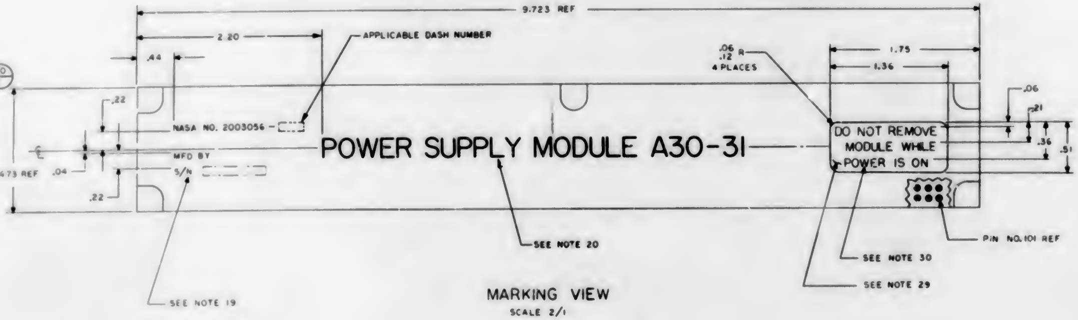
MARKING VIEW
SCALE 2/1



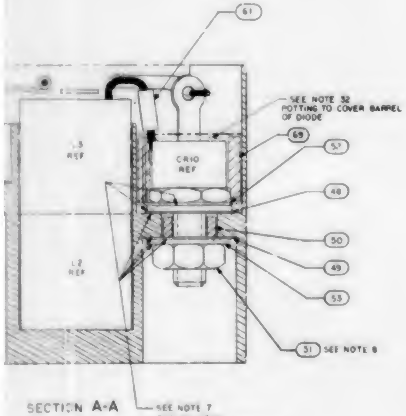


SYM	ZONE	DESCRIPTION				
A		REVISED PER TDRR 20951				
B		REVISED PER TDRR 22564				
C		REVISED PER TDRR 23611				
D		REVISED PER TDRR 24192				





MARKING VIEW
SCALE 2/1



SECTION A-A

SEE NOTE 7
TYP ALL STUD
MOUNTED COMPONENTS

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
	2005010	SCHEMATIC	REF
AR	1006757-21	WIRE, ELECTRICAL	70
1	2004928	SLEEVE THERMAL	69
1	1006755-126	CAPACITOR	68
1	1006756-79	CAPACITOR	67
AR	1006757-13	WIRE, ELECTRICAL	66
AR	1006757-23	WIRE, ELECTRICAL	65
3	2004039	TERMINAL THREADED	64
AR	1006776-22	INSULATION SLEEVING	63
AR	1006776-20	INSULATION, SLEEVING	62
AR	1006776-18	INSULATION, SLEEVING	61
			60
			59
			58
			57
			56
AR	QQ-W-343,TYPES,18	WIRE, ELECTRICAL	55
AR	QQ-W-343,TYPES,16	WIRE, ELECTRICAL	54
3	1008071-2	WASHER, FLAT	53
2	2008013-5	TERMINAL, LUG	52
3	MS20364E1032	NUT, HEX, SELF-LOCKING	51
3	1008025-5	BUSHING, INSULATOR	50
3	1008024-1	WASHER, INSULATOR	49
6	1008024-2	WASHER, INSULATOR	48
1	MS20364B-524	NUT, HEX, SELF-LOCKING	47
1	1008071-7	WASHER, FLAT	46
1	2008020-3	BUSHING, INSULATOR	45
1	1008024-6	WASHER, INSULATOR	44
2	1008024-5	WASHER, INSULATOR	43
3	NAS620C6L	WASHER, FLAT	42
6	1008024-7	WASHER, INSULATOR	41
3	MS20364-632	NUT, HEX, SELF-LOCKING	40
3	2008020-4	INSULATOR, BUSHING	39
3	1006336-002	HEATSINK, TRANSISTOR	38
17	1006708	TERMINAL, STUD	37
1	1004722-2	SCREW, CAPTIVE	36
4	MS16633-4015	RING RETAINING EXTERNAL "E"	35
5	1004546-3	WASHER, FLAT	34
4	1004546-1	WASHER, FLAT	33
4	1004579-1	SCREW, JACKING	32
1	1006328	INDUCTOR	31
3	1006327	INDUCTOR	30
1	1006304-002	RELAY	29
1	2004004-002	TRANSISTOR, POTTED	28
1	1006363-001	TRANSISTOR	27
2	2004004-001	TRANSISTOR, POTTED	26
1	1006317	TRANSISTOR	25
3	2004004-004	TRANSISTOR	24
2	1006329	DIODE	23
1	2004112-001	DIODE	22
2	2004103-001	DIODE	21
9	1006755-134	CAPACITOR	20
6	1006755-19	CAPACITOR	19
2	1006330-001	RESISTOR	18
1	1010604-50	RESISTOR	17
1	1010389-23	RESISTOR	16
1	1010389-113	RESISTOR	15
1	1010389-51	RESISTOR	14
1	1006750-56	RESISTOR	13
2	1006750-43	RESISTOR	12
1	1006750-39	RESISTOR	11
2	1006750-15	RESISTOR	10
1	1006750-1	RESISTOR	9
1	SEE NOTE 27	RESISTOR	8
1	SEE NOTE 27	RESISTOR	7
1	2004079	INSULATOR D	6
1	2004078	INSULATOR C	5
1	2004081-011	INSULATOR B	4
1	2004080-011	INSULATOR A	3
1	2003029-011	CONTROL CIRCUIT SUB-ASSY	2
1	2003057-011	HEADER HOUSING ASSY	1

-011 LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± — DECIMALS ±.02 ANGLES ± —
DO NOT SCALE THIS DRAWING

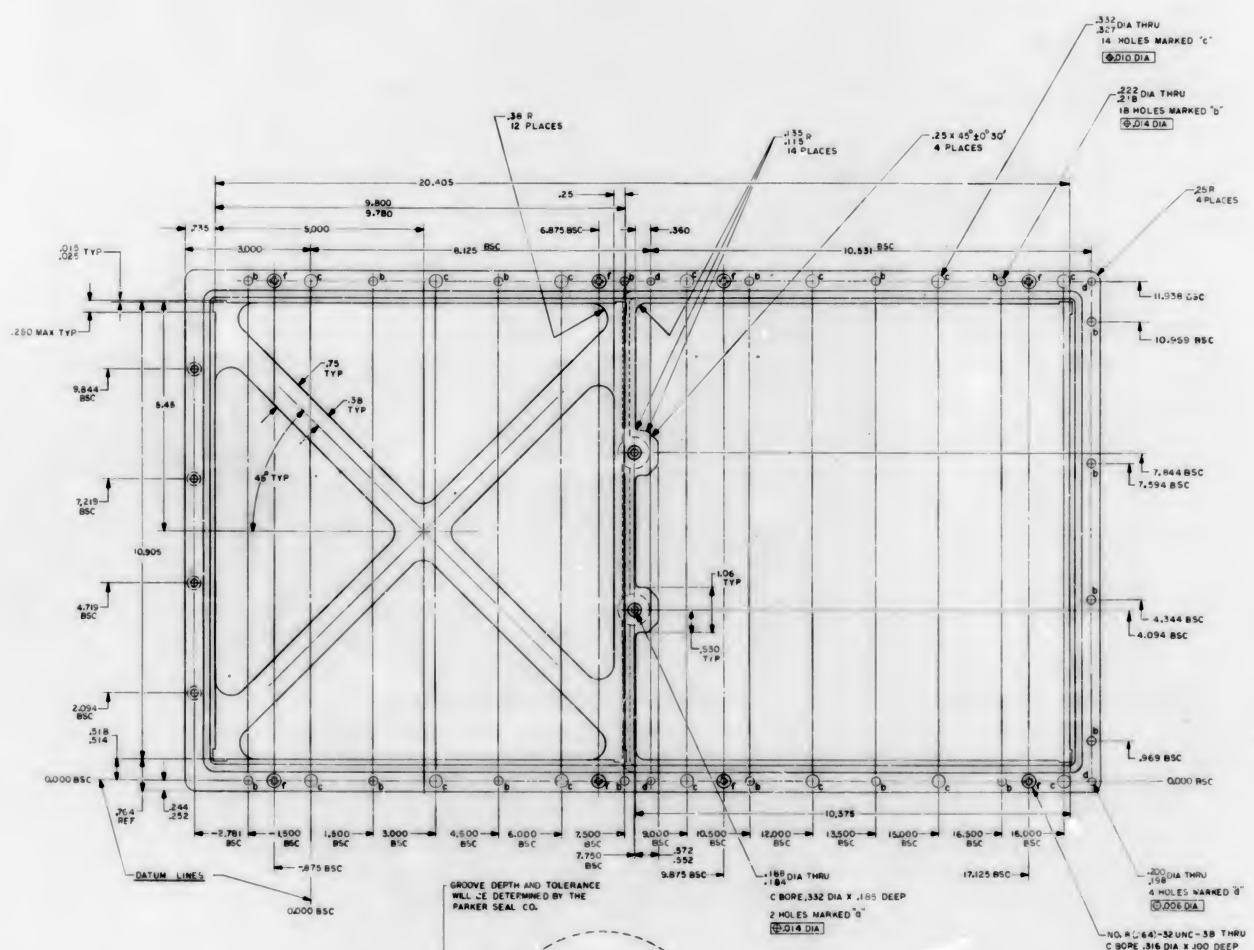
2003100 NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY MODULE
A30-31
ASSEMBLY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003056

2003056 D

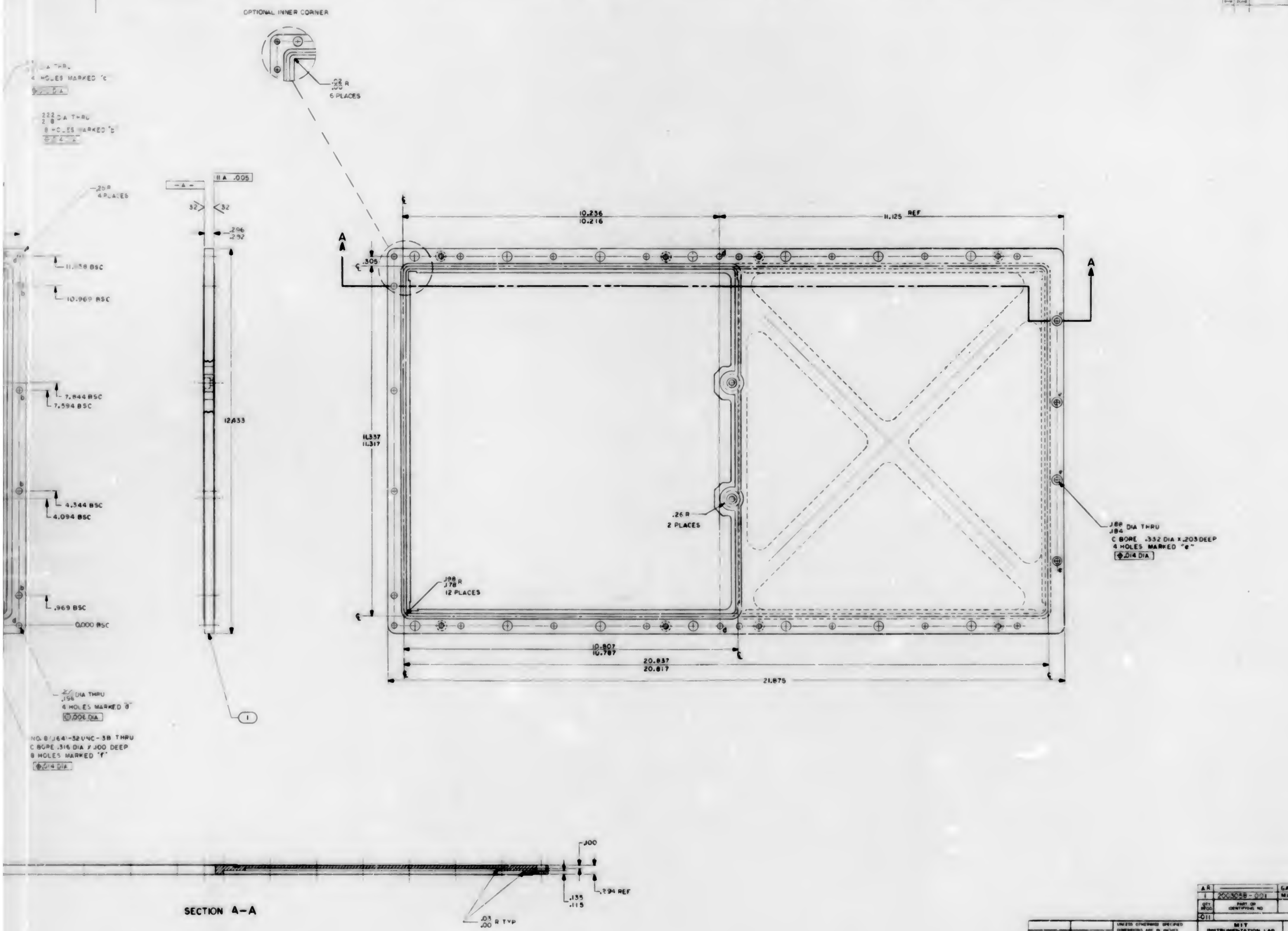


NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: 6061 T6 AL PER QQ-A 250/11, TEMP 6
3. ALL SURFACES 125/ UNLESS OTHERWISE SPECIFIED
4. REMOVE BURRS AND SHARP EDGES .005/.015
5. FINISH: CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
6. FIND NO. 2 TO BE MOLDED TO FIND NO. 1 AS SHOWN
7. IDENTIFY WITH DRAWING NO. AND REVISION PER NDI002019

TYPICAL GROOVE & GASKET INSTALLATION
SCALE: NONE

SECTION A-A

2003058



QTY	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
AR		GASK-O-SEAL	2
1	2003058-001	MID SPACER	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. CAPACITOR VALUES ARE IN μf. RESISTOR VALUES ARE IN OHMS. DO NOT SCALE THIS DRAWING.

MATERIAL: NOTED

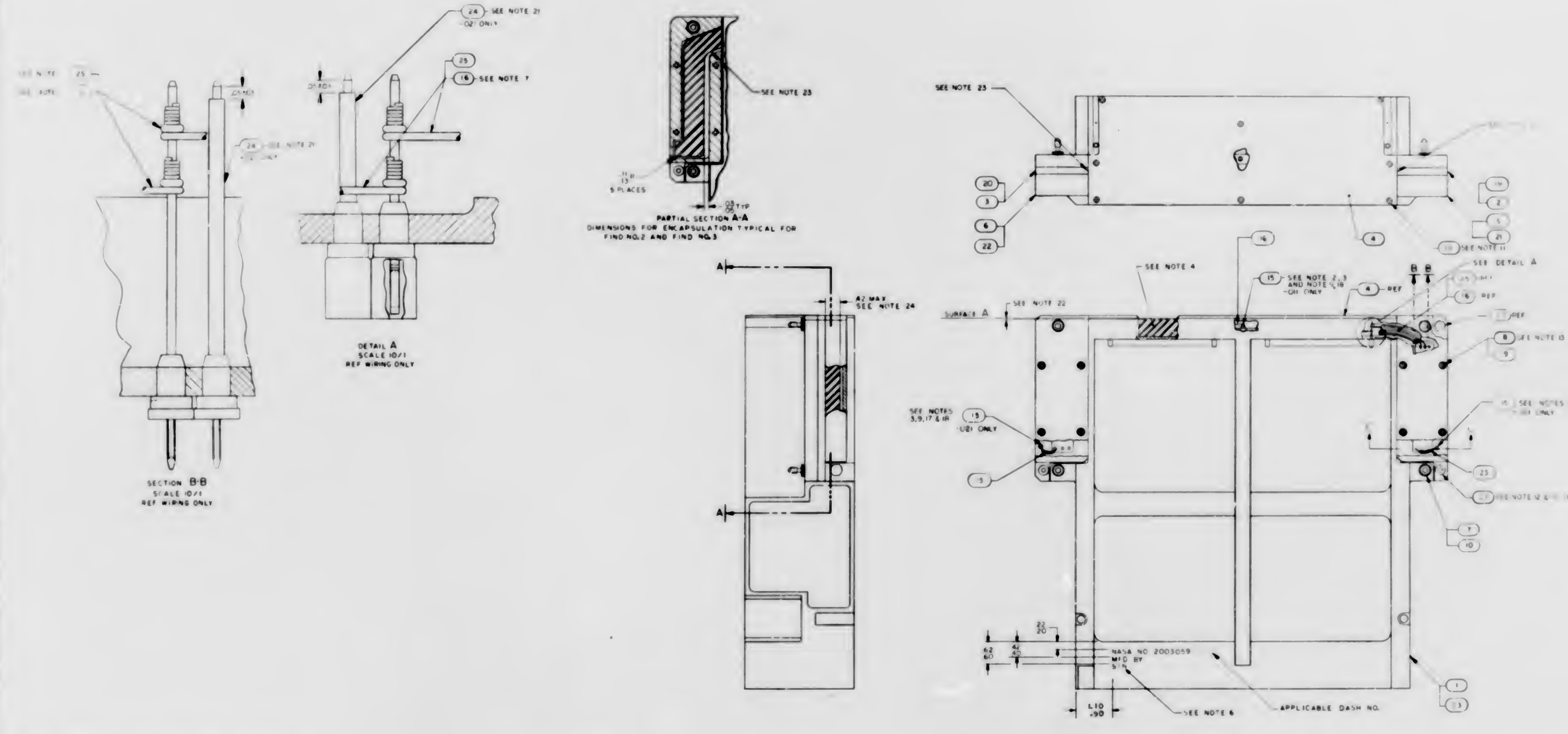
2003100 — NEXT ASSY — APPLICATION

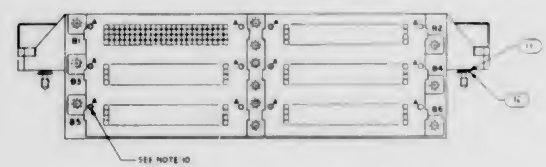
MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER, HOUSTON TEXAS

MID-SPACER ASSY
COMPUTER ASSEMBLY

CODE IDENT NO 80230 | SIZE J | DRAWING NO 2003058





NOTES

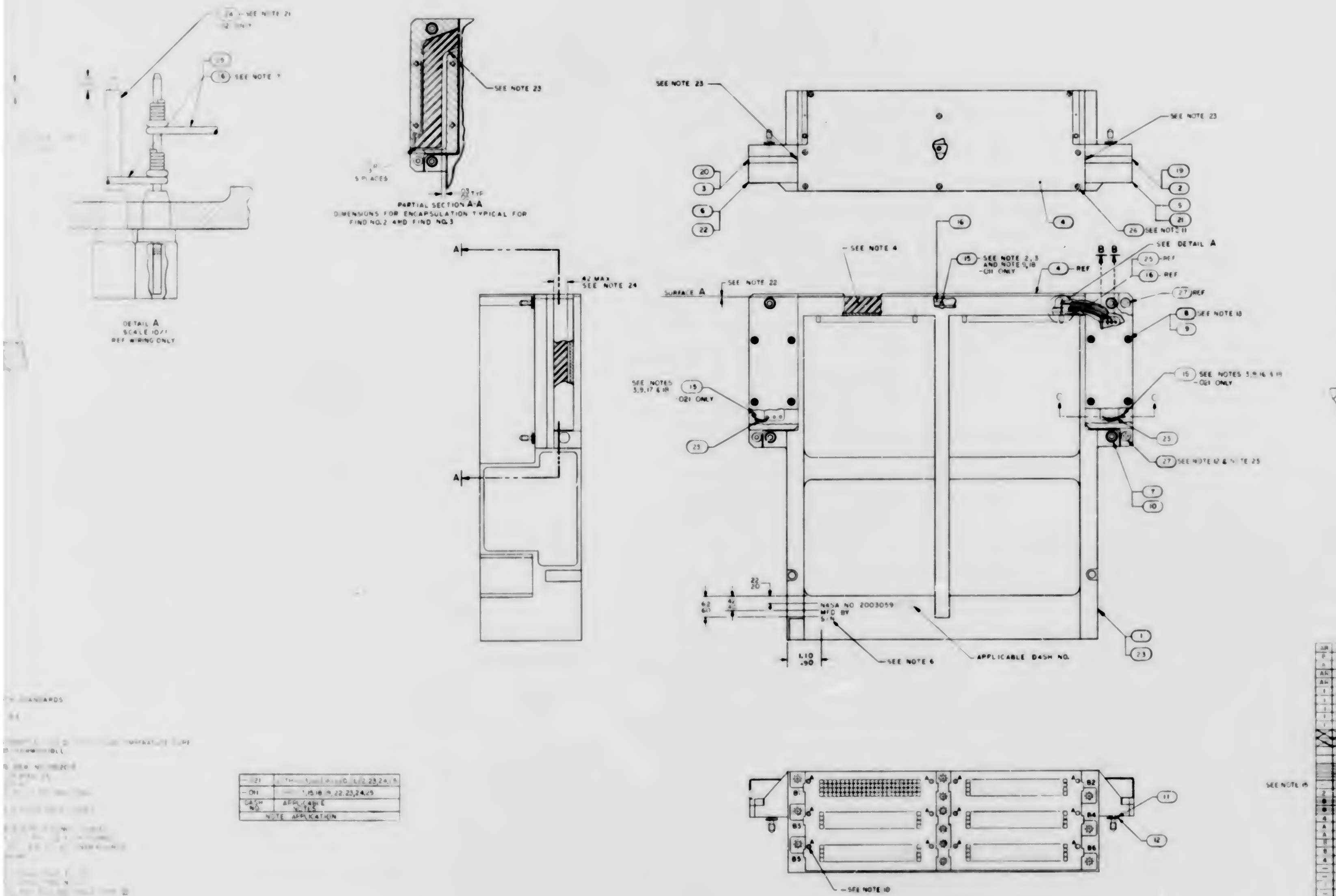
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. CONNECT FIND NO.15 TO PIN NO.301 OF B3 USING FIND NO.16
3. [illegible] NO 1002005
4. ENCAPSULATE WIREWRAP SIDE PER ND1002 [illegible] TYPE II, [illegible] TEMPERATURE CURE
5. TEMPORARY HOLDOWN OF WIREWRAPING PERMISSIBLE PRIOR TO ENCAPSULATING
6. MARK [illegible] .08 HIGH BLACK CHARACTERS PER ND1002019 AND ND 002122 TYPE II, CLASS 2 AND SERIALIZE PER N[illegible]002023 USING INK 1006271 [illegible]
7. WIREWRAP USING FIND NO.16 [illegible] PER ND1002031
8. AR DENOTES AS REQUIRED
9. MOUNTING TORQUE FOR FIND NO.15 TO BE 15 TO 20 INCH OUNCES
10. PLUG [illegible] HOLES BEFORE POTTING
11. MOUNTING TORQUE FOR FIND NO. [illegible] TO BE [illegible] TO 6 [illegible] INCH OUNCES
12. MOUNTING TORQUE FOR FIND NO.27 TO BE 5.0 TO 8.0 INCH POUNDS
13. MOUNTING TORQUE FOR FIND NO 8 TO BE 4.0 TO 6.0 INCH POUNDS
14. [illegible]
15. COLOR OF FIND NO 16 TO BE OPTIONAL
16. CONNECT FIND NO [illegible] TO PIN [illegible] OF B41 USING FIND NO [illegible]
17. CONNECT FIND NO.5 TO PIN [illegible] OF B42 USING FIND NO.23
18. SEAL FIND NO.15 TO FIND NO.23 OR FIND NO.1 PER ND1002004 TYPE II
19. WIRES SPECIFIED IN 2[illegible] AS WIRE TO BE WRAPPED BY HAND [illegible] ANY TO BE ADDED AT THIS ASSY LEVEL
20. CONNECT PIN NO.301 OF B1 THRU B6 TOGETHER USING FIND NO 25 PER ND1[illegible]2031
21. SLEEVE ALL WRAPPOSTS NOT WIREWRAPPED USING FIND NO.24
22. POTTING TO BE .005 MINIMUM BELOW SURFACE A AND COVER ALL TERMINALS AND WIRING
23. FIND NO 1 OR 23 TO BE COMPLETELY COVERED BY ENCAPSULATION POTTING PERMISSIBLE IN GAP BETWEEN FIND NO 2 OR 19 AND FIND NO 1 OR 23, AND BETWEEN FIND NO 3 OR 20 AND FIND NO 1 OR 23
24. POTTING TO COVER ALL TERMINALS AND WIRING
25. APPLY [illegible] THREADS ONLY OF FIND NO.2[illegible] PRIOR TO ASSEMBLY

DASH NO.	APPLICABLE NOTES
-021	1,3 THRU 13,[illegible],17,[illegible],20,21,22,23,24,25
-011	1 THRU 13,15,18,19,22,23,24,25

NOTE APPLICATION

F-1/2

SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED [illegible]				
B		REVISED PER TDRR 25490				
C		REVISED PER [illegible] 26099				
D		REVISED PER T[illegible]				
E		REVISED PER TDRR 28246				
F		REVISED PER TDRR [illegible]				
G		REVISED PER TDRR 292[illegible]8				
H		REVISED PER TDRR 30063				
J		REVISED PER TDRR 32637				
K		[illegible] PER TDRR 3451[illegible]				



-021	[illegible] 2,3,[illegible] 22,23,24,25
-011	[illegible] 5,18,19,22,23,24,25
DASH NO.	APPLICABLE NOTE
NOTE APPLICATION	

QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
AR	AR	1005[illegible]	[illegible] FUEL AND OIL RESISTANT	[illegible]
6	6	NAS1219 [illegible]	[illegible]	[illegible]
6	6	[illegible]	[illegible]	[illegible]
AR	—	[illegible] 003	WIRE, ELECTRICAL, INSULATED	[illegible]
AR	—	[illegible]6776-21	INSULATION, SLEEVING	[illegible]
1	—	2003066-021	INTERCONNECTION HEADER SUBASSY	2[illegible]
1	—	[illegible]	COVER CONNECTOR [illegible]	[illegible]
1	—	2004[illegible]	COVER CONNECTOR [illegible]	[illegible]
1	—	200[illegible]64-021	CONNECTOR B42, SUBASSY	[illegible]
1	—	2003065-021	CONNECTOR B41 SUBASSY	[illegible]
		2[illegible]40	WIRE WRAP DECK	REF
		2005018	INTERCONNECTION DIAGRAM	REF
	AR	1006778-25	INSULATION, SLEEVING	18
	AR	1006781-[illegible]	WIRE, ELECTRICAL	17
—	AR	1006732	WIRE, ELECTRICAL, INSULATED	16
2	1	2004039	TERMINAL, THREADED	15
8	8	1010630-2	SCREW, 100° FLAT HD	14
8	8	1010630-28	SCREW, 100° FLAT HD	13
4	4	MS16633-A015	RING, RETAINING	12
4	4	1004546-3	WASHER, FLAT	11
4	4	1004546-1	WASHER, FLAT	10
8	8	NAS620-4	WASHER, FLAT	9
8	8	1001489-6	SCREW, HEX, SOC HD	8
4	4	1004579-1	SCREW, JACKING	7
—	1	2004109	COVER, CONNECTOR B42	6
—	1	2004108	COVER, CONNECTOR B41	5
1	1	2004107	COVER, INTERCONNECTION HEADER	4
—	1	2003064-011	CONNECTOR B42, SUBASSY	3
—	1	2003065-011	CONNECTOR B41, SUBASSY	2
—	1	2003066-011	INTERCONNECTION HEADER, SUBASSY	1
-021	-011	LIST OF MATERIAL		

NEXT ASSY	USED ON
2003200	
2003100	
APPLICATION	

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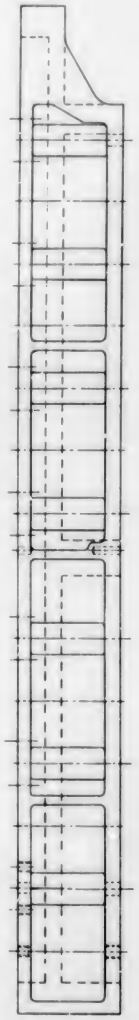
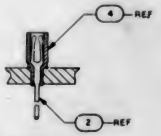
HOUSTON TEXAS

INTERCONNECTION HEADER ASSEMBLY
FIXED MEMORY B1 – 6

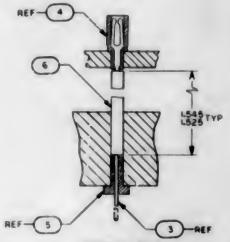
CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003059

F 2 / 2

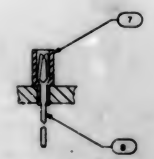




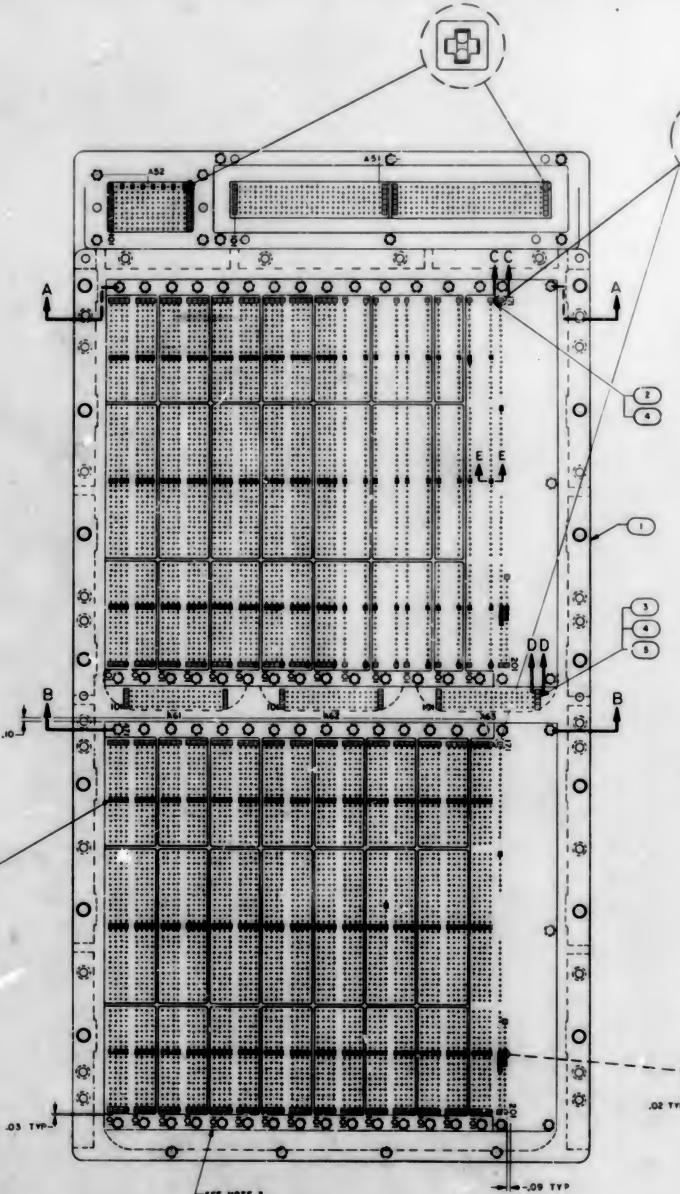
SECTION C-G
SCALE 4/1

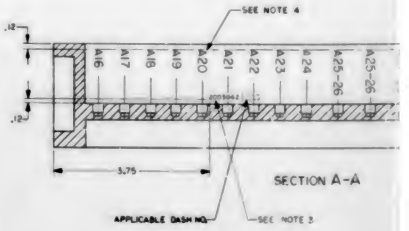


SECTION D-D
SCALE 4/1

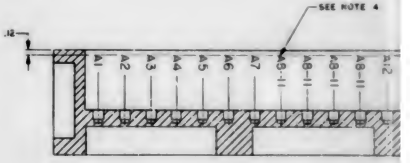


SECTION E-E
SCALE 4/1

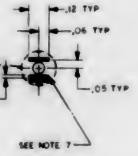




SECTION A-A



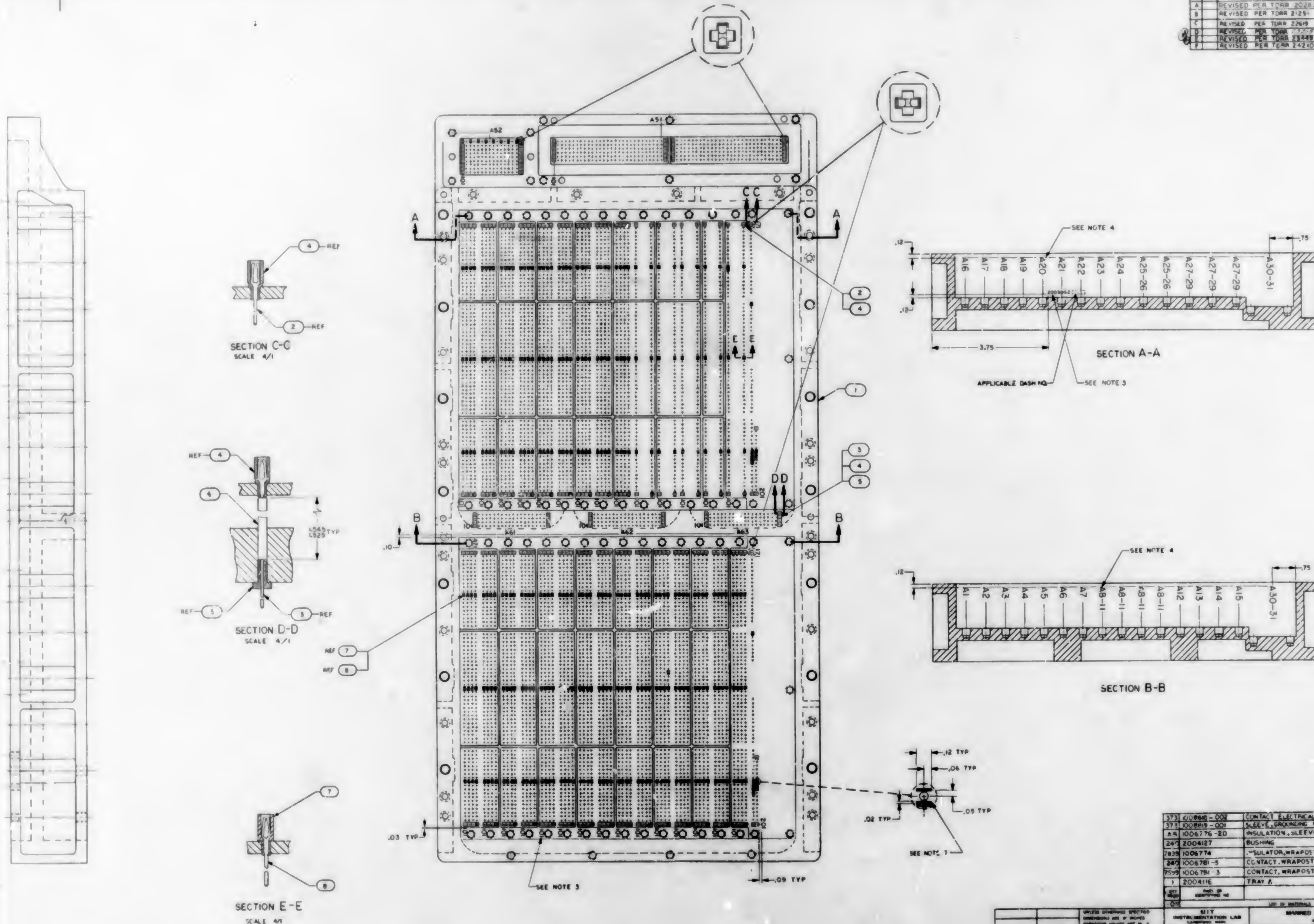
SECTION B-B



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. ASSEMBLE FIND NO. 2,3,4,7 & 8 TO FIND NO.1 PER ND1002136.
3. MARK .10/.08 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II,CLASS 2 USING INK 1006271-11
4. MARK .17/.13 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II,CLASS 2 USING INK 1006271-11
5. AR DENOTES AS REQUIRED
6.
7. MARK BLACK AS SHOWN PER ND1002019 USING INK 1006271-11

2003062 E

A		REVISED PER TDRR 20283				
B		REVISED PER TDRR 21251				
C		REVISED PER TDRR 22619				
D		REVISED PER TDRR 23273	AA			
E		REVISED PER TDRR 23449	AA			
F		REVISED PER TDRR 24210				



QTY	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
373	1008816-002	CONTACT ELECTRICAL WRAPOST	8
373	1008819-001	SLEEVE, GROUNDING FEMALE	7
AR	1006776-20	INSULATION, SLEEVING	6
242	2004127	BUSHING	5
7835	1006774	INSULATOR, WRAPOST, FEMALE, MINAT	4
240	1006781-5	CONTACT, WRAPOST, FEMALE, MINAT	3
7595	1006781-3	CONTACT, WRAPOST, FEMALE, MINAT	2
1	2004116	TRAY A	1

-011 LIST OF MATERIALS

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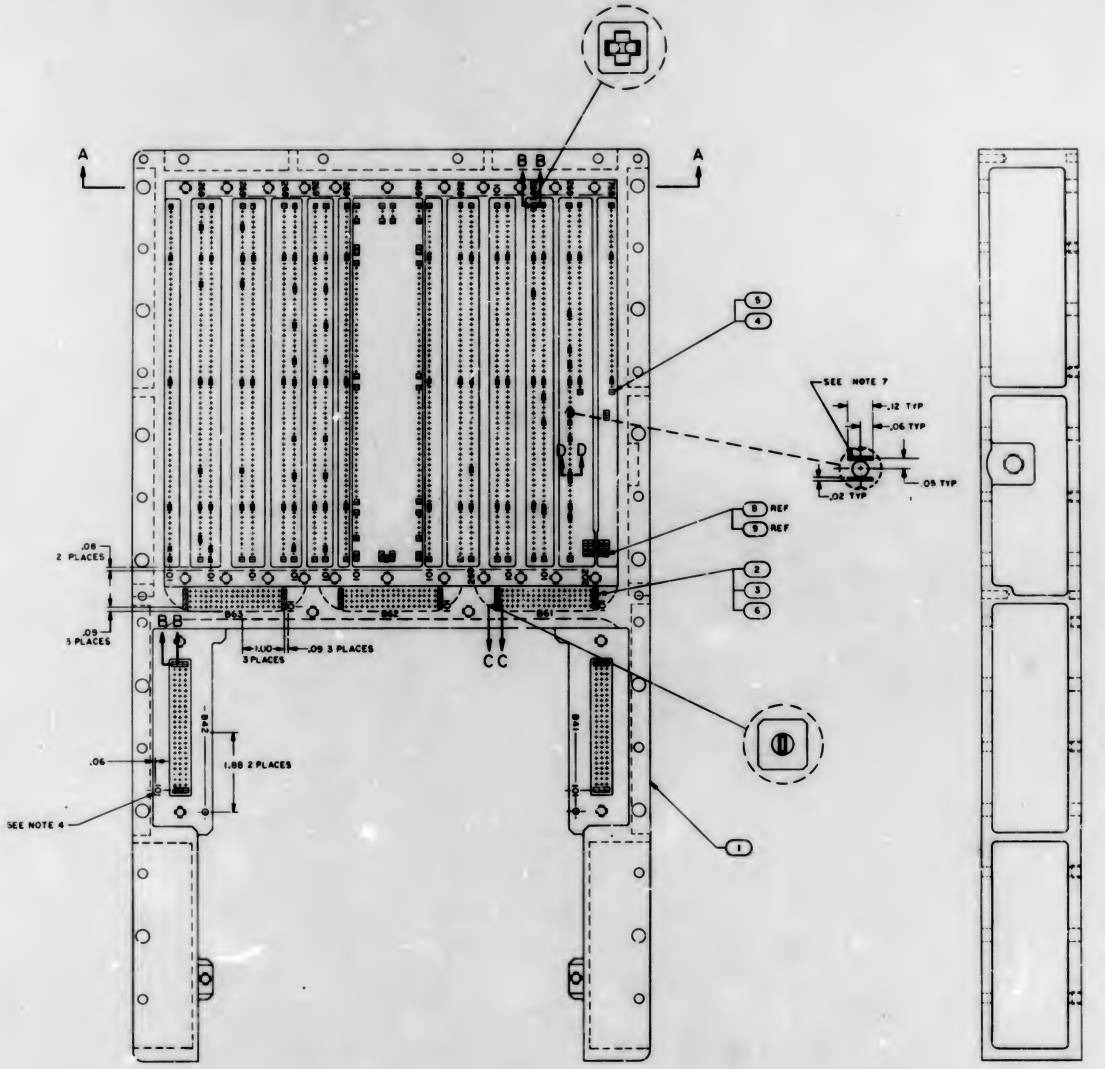
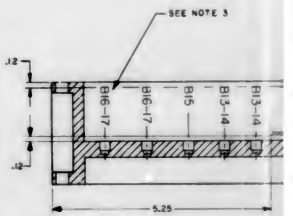
HOUSTON, TEXAS

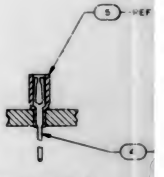
TRAY A SUBASSEMBLY
AGC

80230 J 2003062

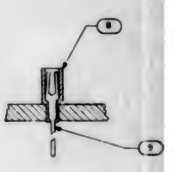




SEC

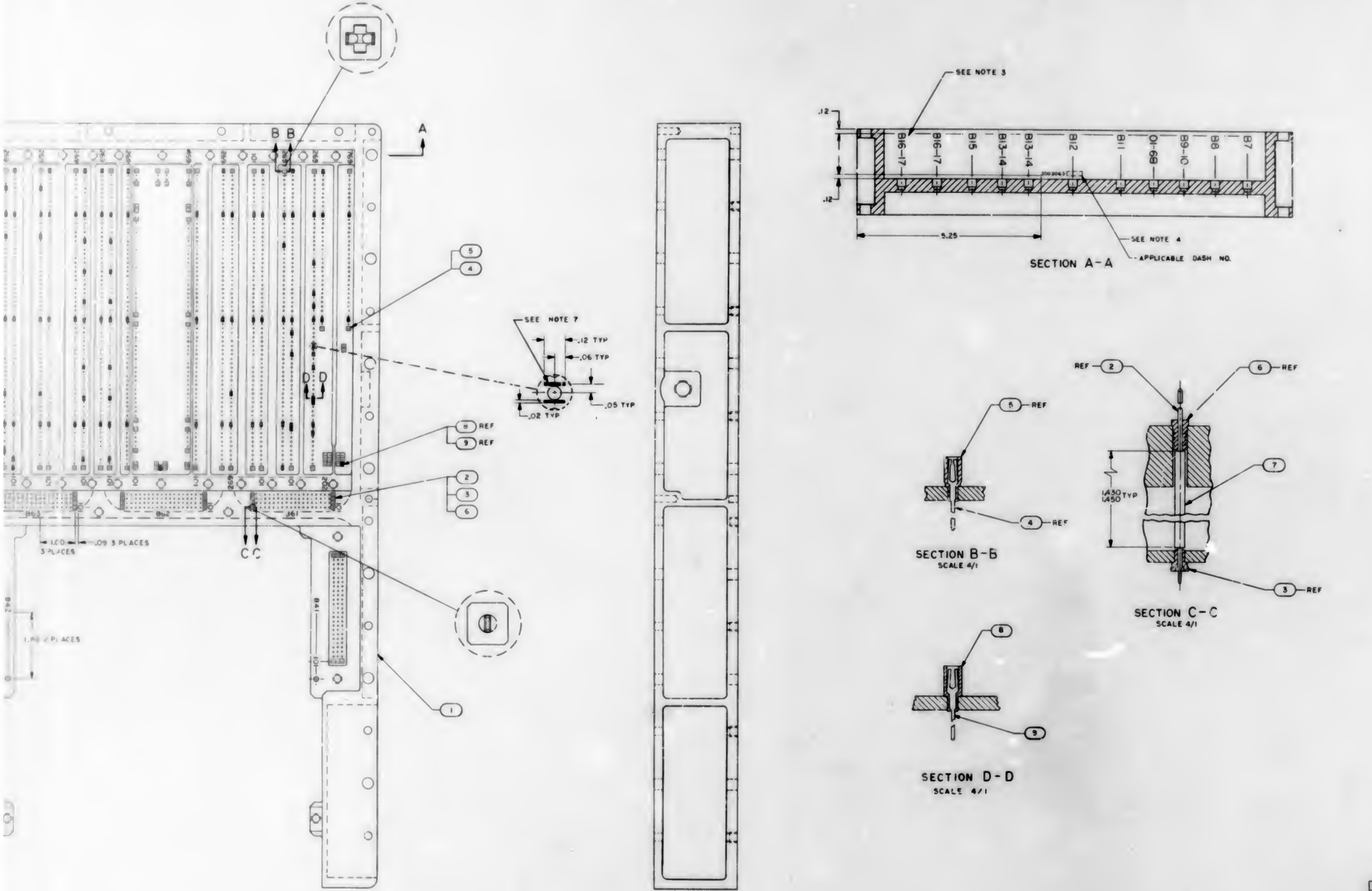


SECTION B-B
SCALE 4/1



SECTION D-D
SCALE 4/1

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO.2,3,4,8 AND 9 TO FIND NO.1 PER ND1002136
3. MARK .7/.9 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2, USING INK 1006271-11
4. MARK .10/.08 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2, USING INK 1006271-11
5. AR DENOTES AS REQUIRED
6.
7. MARK BLACK AS SHOWN PER ND1002013 USING INK 1006271-11



REV	DESCRIPTION
A	REVISED PER TDRR 20284
B	REVISED PER TDRR 21250
C	REVISED PER TDRR 22620
D	REVISED PER TDRR 23214
E	REVISED PER TDRR 23442
F	REVISED PER TDRR 24209
G	REVISED PER TDRR 24498

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	ITEM NO
108	1008818-002	CONTACT, ELECTRICAL WRAPOST	9
108	1008819-001	SLEEVE, GROUNDING FEMALE	8
AR	1006776-20	INSULATION SLEEVING	7
240	2004127	BUSHING	6
1505	1006774	INSULATOR, WRAPOST, FEMALE, MIN	5
1505	1006781-2	CONTACT, WRAPOST, FEMALE, MIN	4
240	1006775	INSULATOR, WRAPOST, MALE, MIN	3
240	1006782-9	CONTACT, WRAPOST, MALE, MIN	2
1	2004117	TRAY B	1

LIST OF MATERIALS

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HOUSTON, TEXAS

TRAY B SUBASSEMBLY
AGC

80230 J 2003063

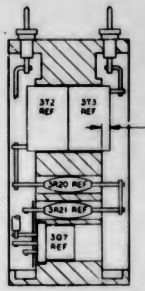
2003063

R2	
PART NO.	VALUE
1006750 - 22	390
- 23	430
- 24	47C
- 25	51C
- 26	560
- 27	620
- 28	680
- 29	750
- 30	820
- 31	910
- 32	1000
- 33	1100
- 34	1200
- 35	1300
- 36	1500
- 37	1600
- 38	1800
1006750 - 39	2000

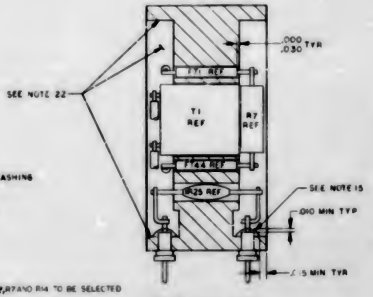
R7	
PART NO.	VALUE
1010364 - 611	75K
- 621	84.4K
- 629	93.1K
- 635	100K
- 633	110K
- 651	121K
- 657	130K
- 669	150K
- 674	162K
- 682	182K
- 693	200K
- 701	221K
- 709	243K
1010364 - 719	274K

R14	
1006750 - 75	62K
- 76	68K
- 77	75K
- 78	82K
- 79	91K
1006750 - 80	100K

R3 (CON'T)	
1006750 - 18	270
- 19	300
- 20	330
- 21	360
- 102	285
- 103	315
- 104	345
1006750-105	375

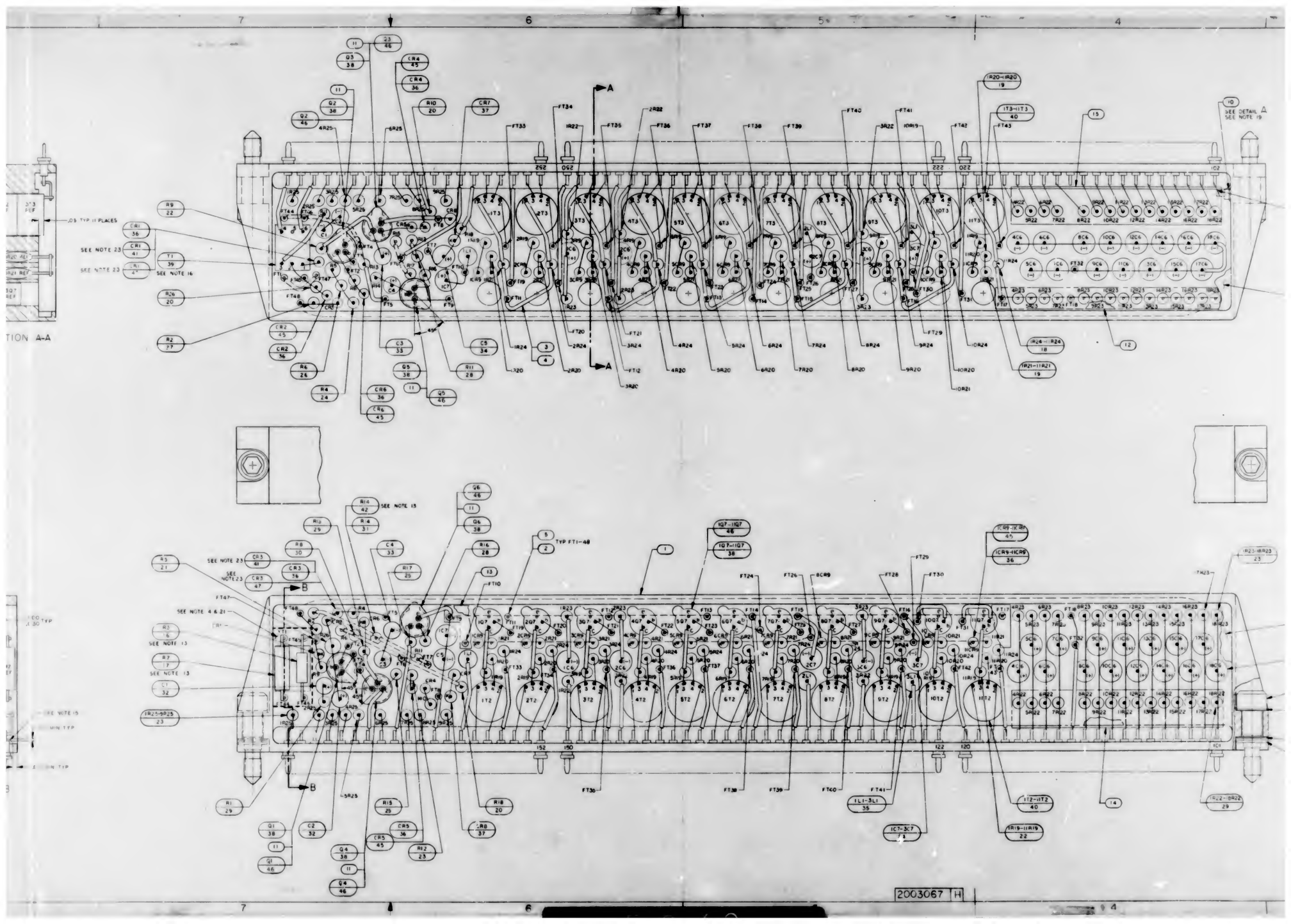


SECTION A-A



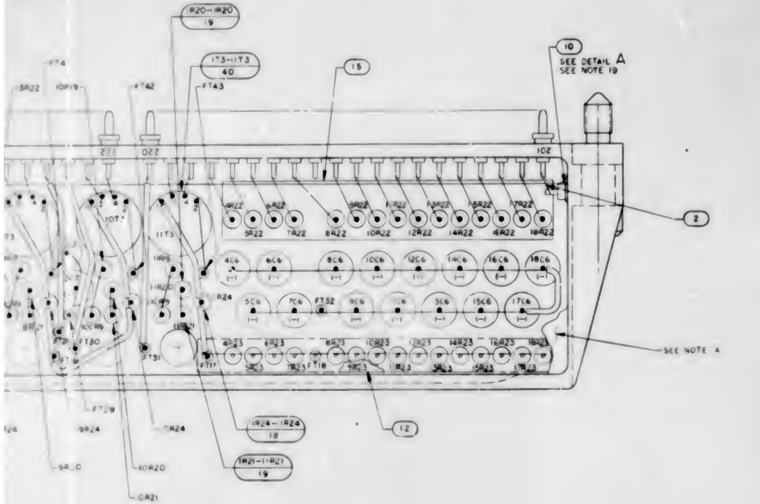
SECTION B-B

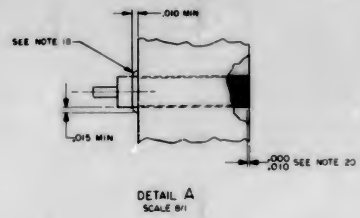
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. WELD PER ND1002005
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. ENCAPSULATE PER ND1002002, EXCEPT AREA INDICATED PER NOTE 21. REMOVE FLASHING
5. MARK 10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, AND SERIALIZE PER ND1002023 USING INK 1006271-1
6. MARK 26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING INK 1006271-1
7. AR DENOTES AS REQUIRED
8. FT DENOTES FEED THRU
9. A DENOTES CATHODE SIDE OF DIODE
10. + DENOTES POSITIVE SIDE OF CAPACITOR
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST R2, R7 AND R14 TO BE SELECTED FROM APPROPRIATE CHART
14. STAMP ALL COMPONENTS PER ND1002009 METHOD C OR D
15. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE VII
16. TRIM UNUSED LEADS OF FIND NO 39 .010/.030 FROM CASE
17. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF #5 2003067
18. SEAL FIND NO 10 TO FIND NO 11 PER ND1002004 TYPE VII
19. MOUNTING TORQUE FOR FIND NO 10 TO BE 15-20 INCH OUNCES
20. FILL HOLE PER ND1002103, DO NOT EVACUATE AFTER FILLING
21. INDICATES AREA TO BE ENCAPSULATED PER ND1002002 AFTER SELECTION OF R3 AND R7 (SEE NOTE 13)
22. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002107, TYPE III
23. CR1 AND CR7 ARE MATCHED PAIR 2004103-002 OR 2004183-002



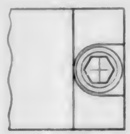
2003067 H

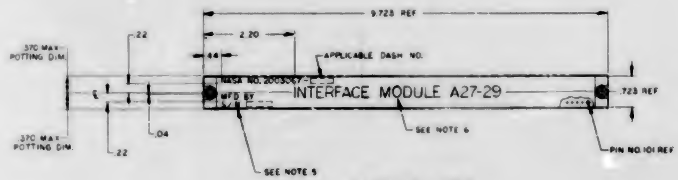
A		REVISED PER TDRR 21344				
B		REVISED PER TDRR 23143				
C		REVISED PER TDRR 24496				
D		REVISED PER TDRR 27309				
E		REVISED PER TDRR 28160				
F		REVISED PER TDRR 29076				
G		REVISED PER TDRR 32561				
H		REVISED PER TDRR 32723				



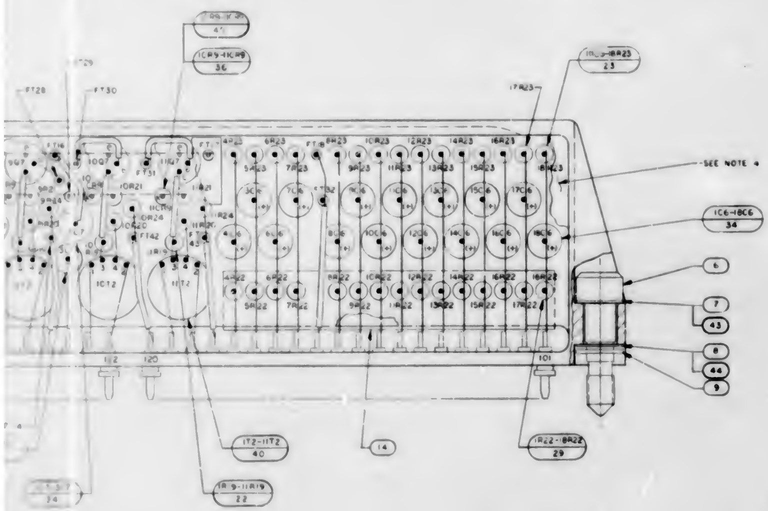


DETAIL A
SCALE 8/1





MARKING VIEW
SCALE 1/1



X	—	—	—	2005933	SCHEMATIC	[illegible]
1	—	—	—	2004183-002	DIODE, MATCHED PAIR	47
17	—	—	—	2004184-001	TRANSISTOR, POTTED	46
15	—	—	—	2004193-001	DIODE	45
—	—	—	X	2005020	SCHEMATIC	REF
—	X	X	—	2005912	SCHEMATIC	REF
2	2	—	—	2004984-003	WASHER, FLAT	44
2	2	—	—	2004984-001	WASHER, FLAT	43
1	1	1	X	SEE NOTE 13	RESISTOR	42
—	1	1	X	2004103-002	DIODE, MATCHED PAIR	41
22	22	22	22	1006319	TRANSFORMER	40
1	1	1	1	1010291 - 4	TRANSFORMER	39
—	17	17	17	2004004 - 001	TRANSISTOR	38
2	2	2	2	2004112 - 002	DIODE, ZENER	37
—	15	15	17	2004103-001	DIODE	36
3	3	3	3	1010406 - 6	CHOKE	35
22	22	22	22	1006755 - 79	CAPACITOR	34
2	2	2	2	1006755 - 69	CAPACITOR	33
2	2	2	2	1006755 - 57	CAPACITOR	32
X	X	X	1	1006750 - 77	RESISTOR	31
1	1	1	1	1006750 - 73	RESISTOR	30
20	20	20	20	1006750 - 63	RESISTOR	29
2	2	2	2	1006750 - 56	RESISTOR	28
1	1	1	1	1006750 - 53	RESISTOR	27
1	1	1	1	1006750 - 52	RESISTOR	26
2	2	2	2	1006750 - 49	RESISTOR	25
1	1	1	1	1006750 - 44	RESISTOR	24
28	28	28	28	1006750 - 39	RESISTOR	23
12	12	12	12	1006750 - 32	RESISTOR	22
1	1	1	1	1010761 - 29	RESISTOR	21
3	3	3	3	1006750 - 25	RESISTOR	20
22	22	22	22	1006750 - 8	RESISTOR	19
11	11	11	11	1006750 - 1	RESISTOR	18
1	1	1	1	SEE NOTE 13	RESISTOR	17
1	1	1	1	SEE NOTE 13	RESISTOR	16
1	1	1	1	2004133	INSULATOR C	15
1	1	1	1	2004132	INSULATOR B	14
1	1	1	1	2004131	INSULATOR A	13
1	1	1	1	2004134	INSULATOR D	12
6	6	6	6	2004092	INSULATOR	11
1	1	1	1	2004039	TERMINAL, THREADED	10
2	2	2	2	MS16633-4015	RING, RETAINING	9
—	—	2	2	1004546 - 3	WASHER, FLAT	8
—	—	2	2	1004546 - 1	WASHER, FLAT	7
2	2	2	2	1004579 - 1	SCREW, JACKING	6
AR	AR	AR	AR	1006776 - 22	INSULATION, SLEEVING	5
AR	AR	AR	AR	1006776 - 21	INSULATION, SLEEVING	4
AR	AR	AR	AR	1006757 - 1	WIRE, ELECTRICAL	3
AR	AR	AR	AR	1006757 - 8	WIRE, ELECTRICAL	2
1	1	1	1	2003067 - 011	HEADER HOUSING ASSY	1
QTY REQD	QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
-041	-031	-021	-011			

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± — DECIMALS ± .01 ANGLES ± 5°
DO NOT SCALE THIS DRAWING

NEXT ASSY	USED ON
2003993	
2003200	
2003100	

APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INTEPFACE MODULE A27-29 ASSEMBLY

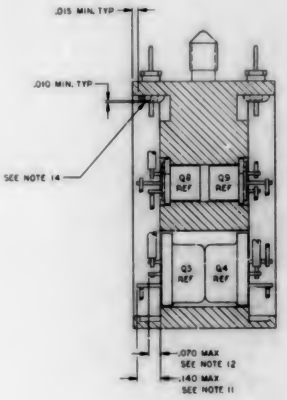
CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003067

2003067 H

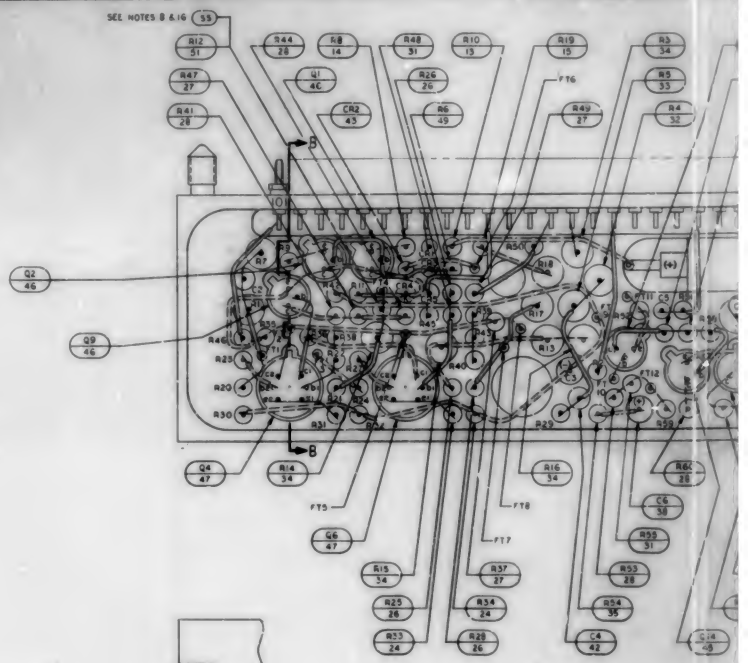
R11,R93	
PART NO.	VALUE
1006755-6	10
1006755-9	27
1006750-1	51
-4	68
-7	91
-9	110
-11	130
-12	150
-13	160
-14	180
-15	200
-16	240
1006750-17	240

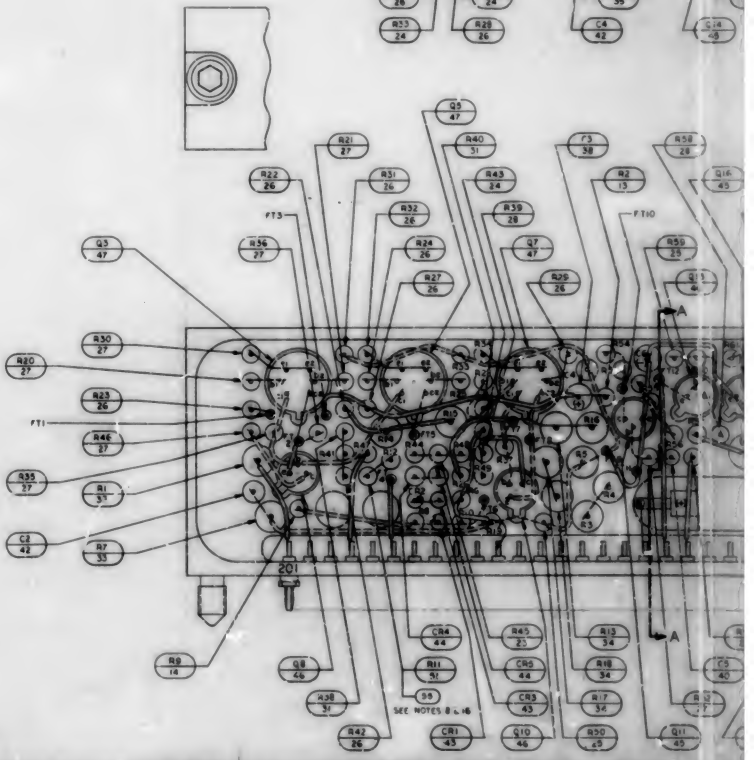
R12	
PART NO.	VALUE
1006750-36	1500
-37	1600
-38	1800
-39	2000
-40	2200
1006750-41	2400

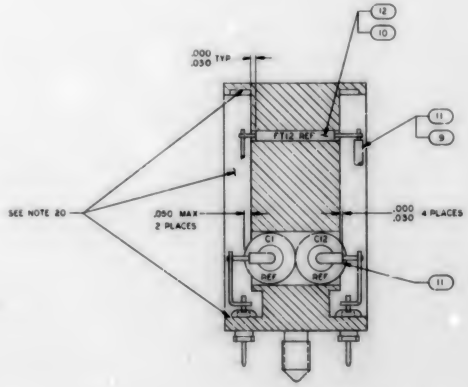
R94	
PART NO.	VALUE
1006750-27	620
-30	820
-32	1000
-34	1200
-35	1300
-36	1500
-37	1600
1006750-38	1800



SECTION B-B
FIND NO. 7 & 8 REMOVED FOR CLARITY

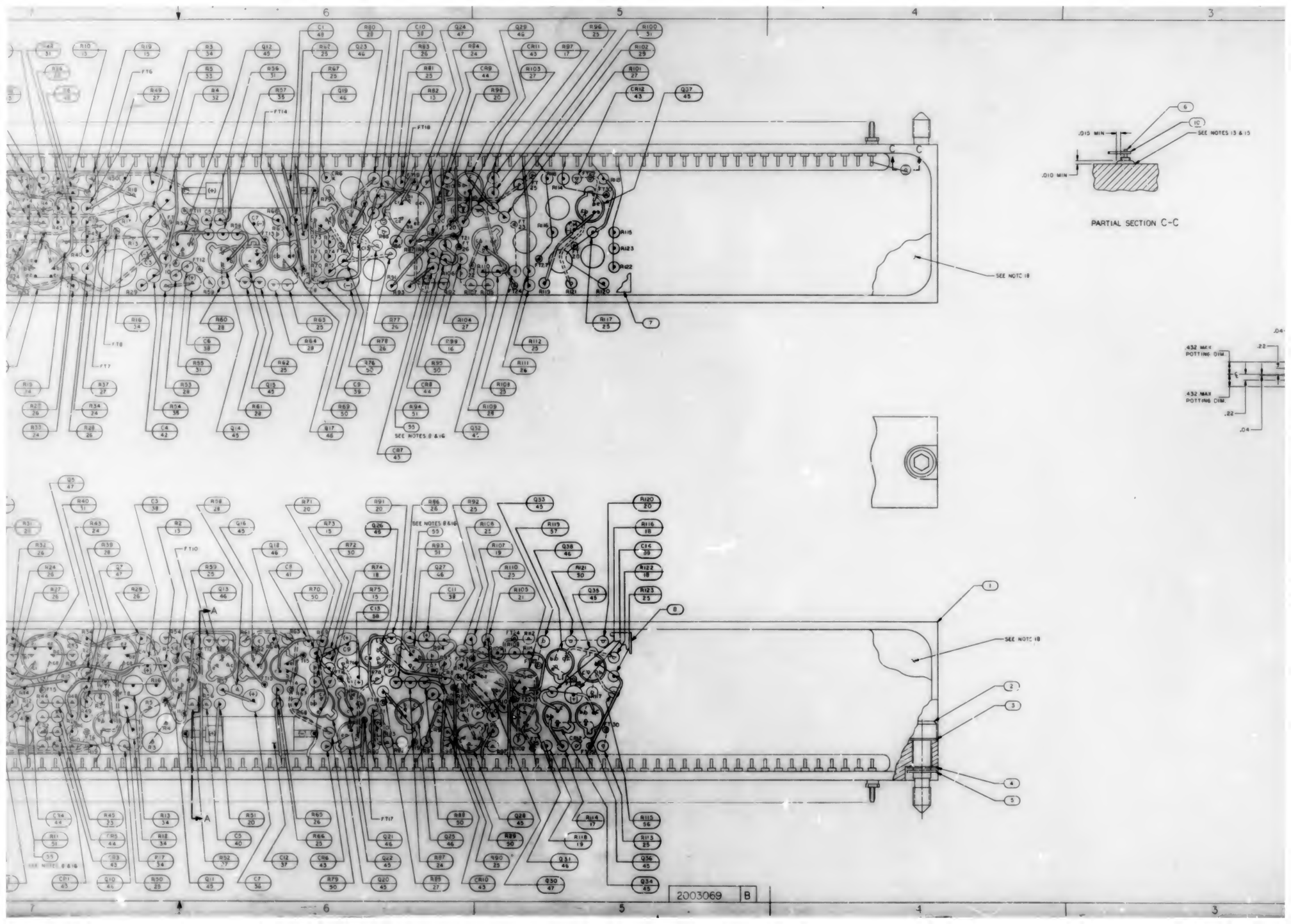




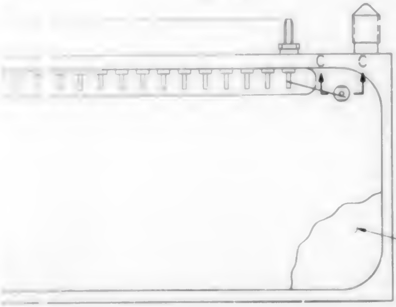


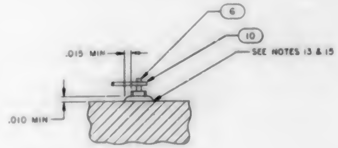
SECTION A-A
FIND NO. 7 & 8 REMOVED FOR CLARITY

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. MARK 7/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
7. MARK 26/24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
8. SELECT R11, R12, R93 AND R94 PER APPLICABLE P3 FROM APPROPRIATE CHART
9. WELD PER ND1002005
10. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. MOUNTING TORQUE FOR FIND NO. 6 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE III
15. SEAL FIND NO. 6 TO HEADER PER ND1002004, TYPE III
16. ASSEMBLE FIND NO. 55 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
17. STAKE FIND NO. 13 THRU FIND NO. 54 AND FIND NO. 56 THRU FIND NO. 59 TO FIND NO. 1 PER ND1001200 METHOD C OR D
18. ENCAPSULATE PER ND1002002, REMOVE FLASHING
19. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P3 2003069
20. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II

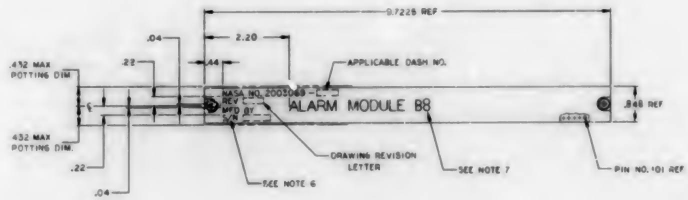

PARTIAL SECTION C-C
.015 MIN
.010 MIN
SEE NOTES 13 & 15
SEE NOTE 18
432 MAX POTTING DIM
432 MAX POTTING DIM
.22
.22
.04
.04
SEE NOTES 8 & 16
2003069
B

REVISIONS			
SYM	ZONE	DESCRIPTION	
A		REVISED PER TDRR 20865	
B		REVISED PER TDRR 21856	

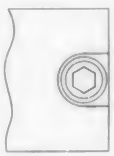


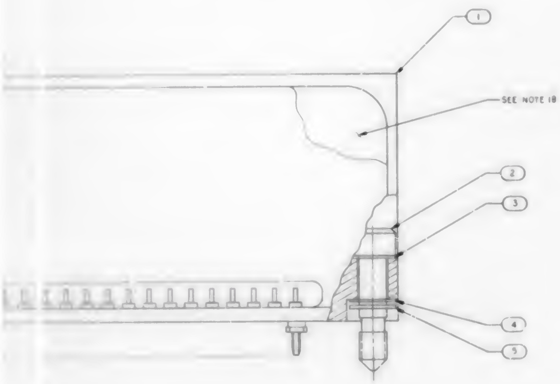


PARTIAL SECTION C-C



MARKING VIEW
SCALE 1/1





QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2003006	SCHEMATIC	REF
1	1006755-69	CAPACITOR	59
1	1006755-21	CAPACITOR	58
1	1006750-50	RESISTOR	57
1	1006750-36	RESISTOR	56
4	2004074	INSULATOR, WASHER	55
[illegible]	SEE NOTE 8	RESISTOR	54
[illegible]	SEE NOTE 8	RESISTOR	53
[illegible]	SEE NOTE 8	RESISTOR	52
4	SEE NOTE 8	RESISTOR	51
8	1006750-39	RESISTOR	50
1	1006750-46	RESISTOR	49
1	1006755-128	CAPACITOR	48
7	1010376-1	TRANSISTOR	47
16	2004004-002	TRANSISTOR	46
[illegible]	2004004-001	TRANSISTOR	45
4	2004112-002	DIODE	44
8	2004103-001	DIODE	43
2	1006777-25	CAPACITOR	42
1	1006777-24	CAPACITOR	41
1	1006777-20	CAPACITOR	40
1	1006755-79	CAPACITOR	39
4	1006755-57	CAPACITOR	38
1	1006755-56	CAPACITOR	37
1	1006755-31	CAPACITOR	36
[illegible]	1006788-6	RESISTOR	35
7	1010377-227	RESISTOR	34
3	1010377-51	RESISTOR	33
1	1010377-50	RESISTOR	32
6	1006750-84	RESISTOR	31
1	1006750-85	RESISTOR	30
1	1006750-63	RESISTOR	29
10	1006750-55	RESISTOR	28
14	1006750-56	RESISTOR	27
17	1006750-49	RESISTOR	26
18	1006750-47	RESISTOR	25
5	1006750-43	RESISTOR	24
1	1006750-41	RESISTOR	23
1	1006750-35	RESISTOR	21
5	1006750-32	RESISTOR	20
2	1006750-30	RESISTOR	19
3	1006750-25	RESISTOR	18
2	1006750-15	RESISTOR	17
1	1006750-14	RESISTOR	16
3	1006750-8	RESISTOR	15
2	1006750-6	RESISTOR	14
3	1006750-1	RESISTOR	13
AR	1006776-23	INSULATION, SLEEVING	12
AR	1006776-21	INSULATION, SLEEVING	11
AR	1006757-8	WIRE, ELEC	10
AR	1006757-1	WIRE, ELEC	9
1	2003077-011	INSULATOR B ASSEMBLY	8
1	2004144	INSULATOR A	7
1	2004039	TERMINAL THREADED	6
2	MS16633-4015	RING, RETAINING, EXTERNAL, "E"	5
2	1004548-3	WASHER, FLAT	4
2	1004546-1	WASHER, FLAT	3
2	1004579-1	SCREW, JACKING	2
1	2003032-011	HEADER MOUNTING ASSY	1
-011	LIST OF MATERIALS		

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

ALARM MODULE
B8
ASSEMBLY

2003100

80230 | J | 2003069

SCALE 4/1

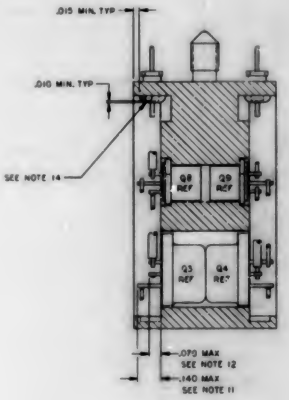
2003069 B

B

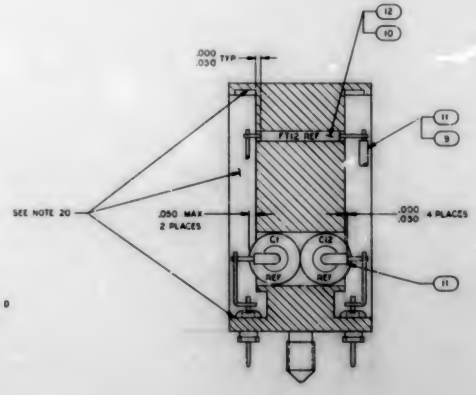
R11,R93	
PART NO.	VALUE
1006789-6	10
10 6791-9	27
6791-1	51
-4	68
-7	91
-9	110
-11	130
-12	150
-13	160
-14	180
-15	200
-16	220
1006750-17	240

R12	
PART NO.	VALUE
1006750-36	1500
-37	1600
-38	1800
-39	2000
-40	2200
1006750-41	2400

R94	
PART NO.	VALUE
1006750-47	620
-50	820
-52	1000
-54	1200
-56	1300
-36	1500
-57	1600
1006750-58	1800

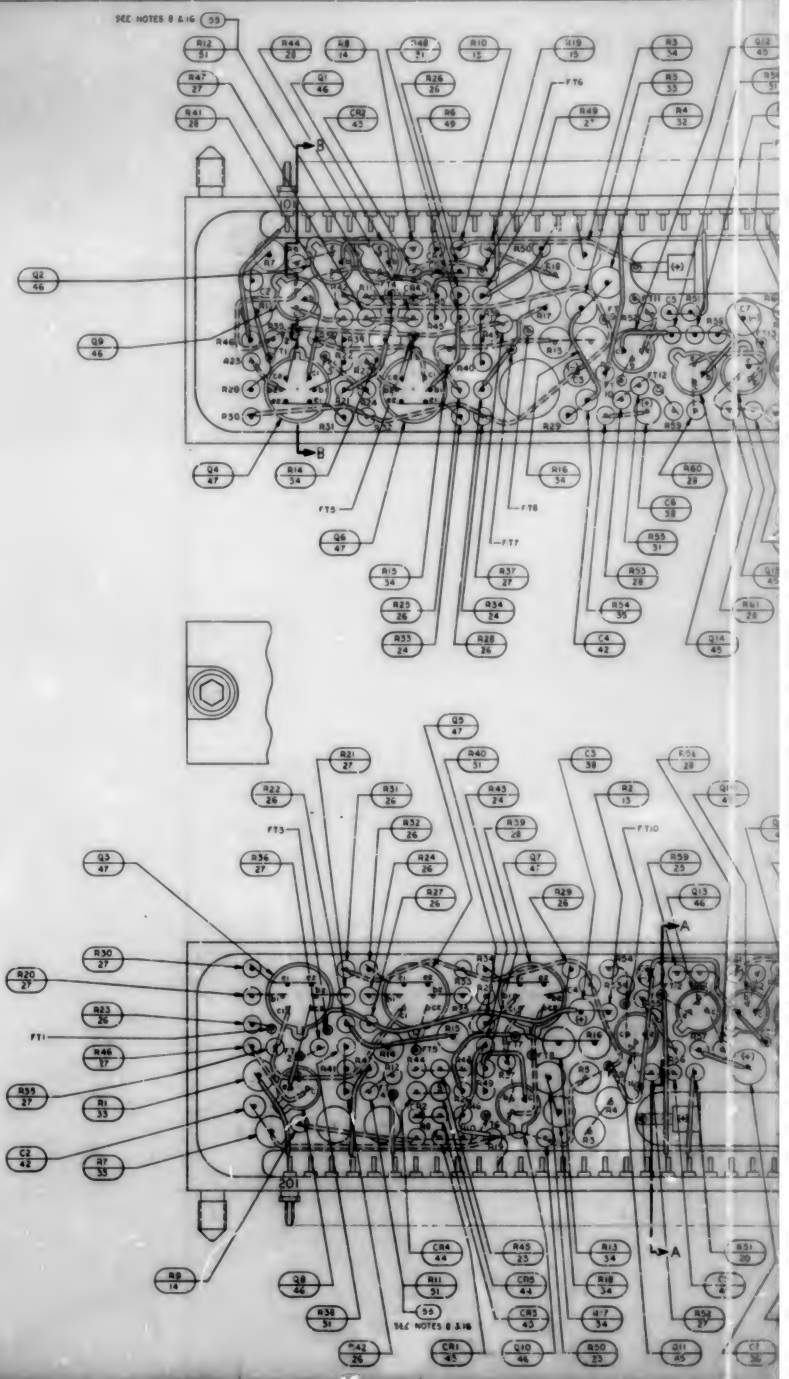


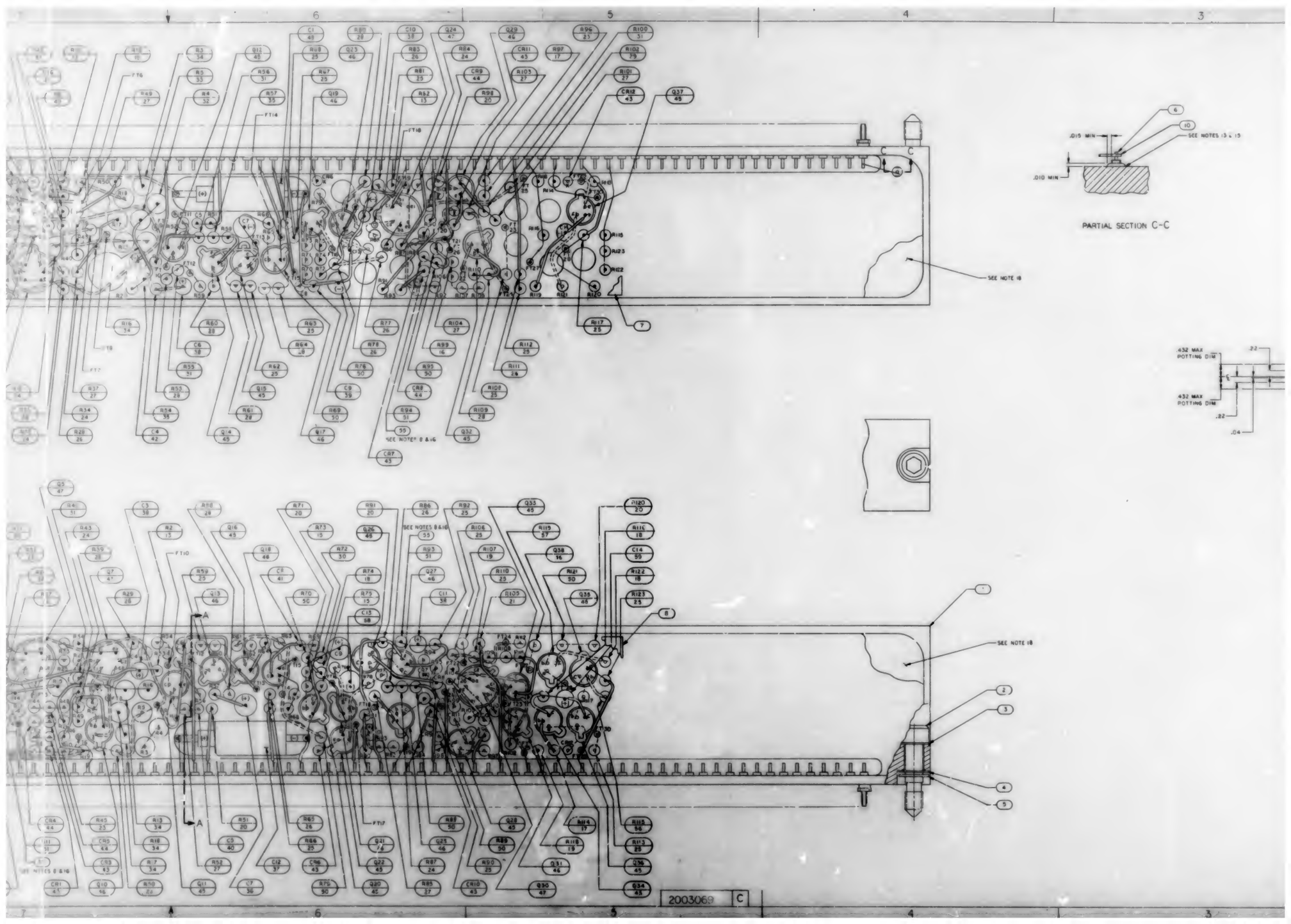
SECTION B-B
FIND NO. 7 & 8 REMOVED FOR CLARITY



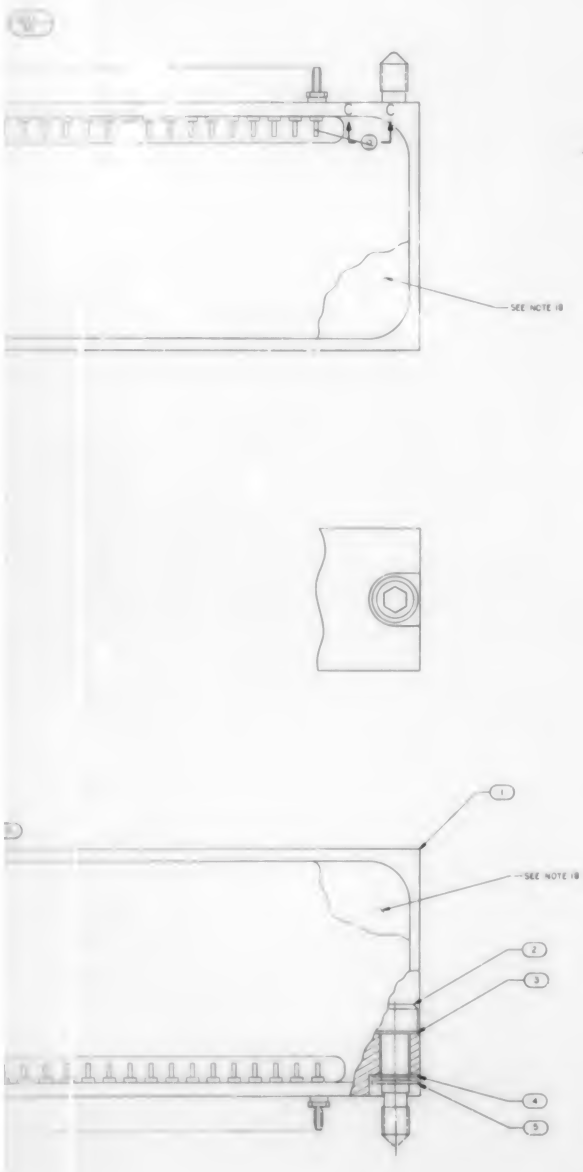
SECTION A-A
FIND NO. 7&8 REMOVED FOR CLARITY

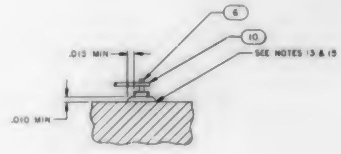
NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002025 USING INK 1006271-1
7. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
8. SELECT R11, R12, R93 AND R94 PER APPLICABLE PS FROM APPROPRIATE CHART
9. WELD PER ND1002005
10. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. MOUNTING TORQUE FOR FIND NO. 6 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE III
15. SEAL FIND NO. 6 TO HEADER PER ND1002004, TYPE III
16. ASSEMBLE FIND NO. 55 TO MOC * AFTER SELECTED VALUE HAS BEEN DETERMINED
17. STAKE FIND NO. 13 THRU FIND NO. 54 AND FIND NO. 56 THRU FIND NO. 59 TO FIND NO. 1 PER ND1002008 METHOD C OR D
18. ENCAPSULATE PER ND1002002. REMOVE FLASHING
19. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003069
20. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II



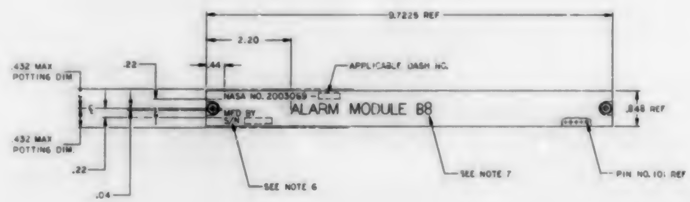

PARTIAL SECTION C-C
.015 MIN
.010 MIN
SEE NOTES 13 & 15
SEE NOTE 18
.432 MAX POTTING DIM
.22
.04
SEE NOTES 8 & 16
2003069
C

SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 2[illegible]965				
B		REVISED PER TDRR 21936				
C		REVISED PER TDRR [illegible]30	KCN			





PARTIAL SECTION C-C



MARKING VIEW
SCALE 1/1

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2003008	SCHEMATIC	REF
1	1006755-69	CAPACITOR	59
1	1006755-21	CAPACITOR	58
1	1006750-53	RESISTOR	57
1	1006750-36	RESISTOR	56
4	2004074	INSULATOR, WASHER	55
[illegible]	SEE NOTE 8	RESISTOR	54
[illegible]	SEE NOTE 8	RESISTOR	53
[illegible]	SEE NOTE 8	RESISTOR	52
4	SEE NOTE 8	RESISTOR	51
8	1006750-39	RESISTOR	50
1	1006750-46	RESISTOR	49
1	1006755-120	CAPACITOR	48
7	1010376-1	TRANSISTOR	47
16	2004004-002	TRANSISTOR	46
15	2004004-001	TRANSISTOR	45
4	2004112-002	DIODE	44
8	2004103-001	DIODE	43
2	1006777-25	CAPACITOR	42
1	1006777-24	CAPACITOR	41
1	1006777-20	CAPACITOR	40
1	1006755-79	CAPACITOR	39
4	1006755-57	CAPACITOR	38
1	1006755-36	CAPACITOR	37
1	1006755-31	CAPACITOR	36
2	1006789-6	RESISTOR	35
7	1010377-227	RESISTOR	34
3	1010377-51	RESISTOR	33
1	1010377-50	RESISTOR	32
6	1006750-94	RESISTOR	31
1	1006750-83	RESISTOR	30
1	1006750-63	RESISTOR	29
10	1006750-5[illegible]	RESISTOR	28
14	1006750-5[illegible]	RESISTOR	27
17	1006750-49	RESISTOR	26
16	1006750-47	RESISTOR	25
5	1006750-45	RESISTOR	24
1	1006750-41	RESISTOR	23
1	1006750-33	RESISTOR	21
5	1006750-32	RESISTOR	20
2	1006750-30	RESISTOR	19
3	1006750-25	RESISTOR	18
2	1006750-19	RESISTOR	17
1	1006750-14	RESISTOR	16
3	1006750-8	RESISTOR	15
2	1006750-6	RESISTOR	14
3	1006750-1	RESISTOR	13
AR	1006776-22	INSULATION, SLEEVING	12
AR	1006776-21	INSULATION, SLEEVING	11
AR	1006757-[illegible]	WIRE, ELEC	10
AR	1006757-1	WIRE, ELEC	9
1	2003077-011	INSULATOR B ASSEMBLY	8
1	2004144	INSULATOR A	7
1	2004739	TERMINAL, THREADED	6
2	MS16633-4015	RING, RETAINING, EXTERNAL, "E"	5
2	[illegible]4948-3	WASHER, FLAT	4
2	2004546-1	WASHER, FLAT	3
2	[illegible]45[illegible]-1	SCREW, JACKING	2
1	2003032-011	[illegible] HOUSING ASSY	1
-011	LIST OF MATERIAL		

NEXT ASSY	USED ON
2003100	
APPLICATION	

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

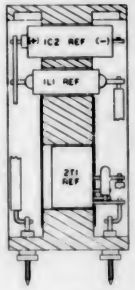
ALARM MODULE B8 ASSEMBLY

CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003069

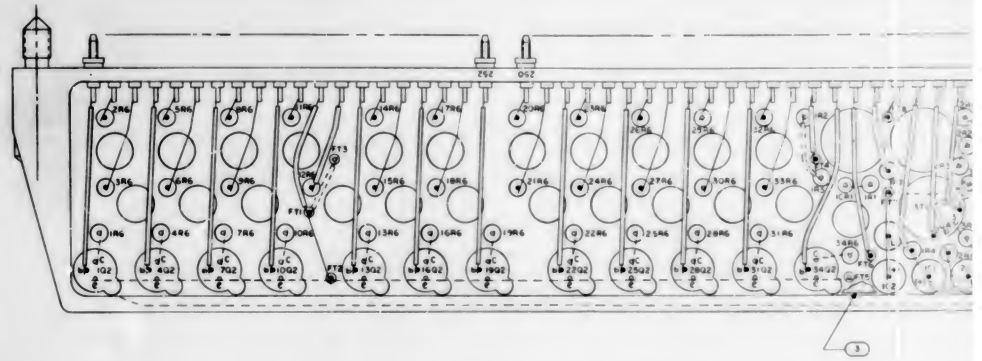
SCALE 1/1

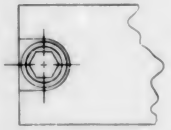
2003069 C

2003069 C

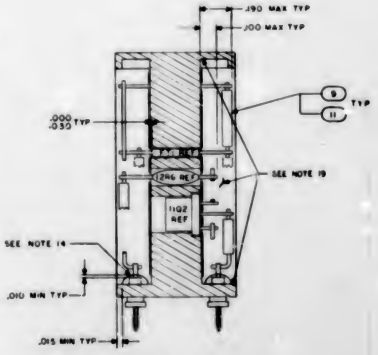


SECTION A-A

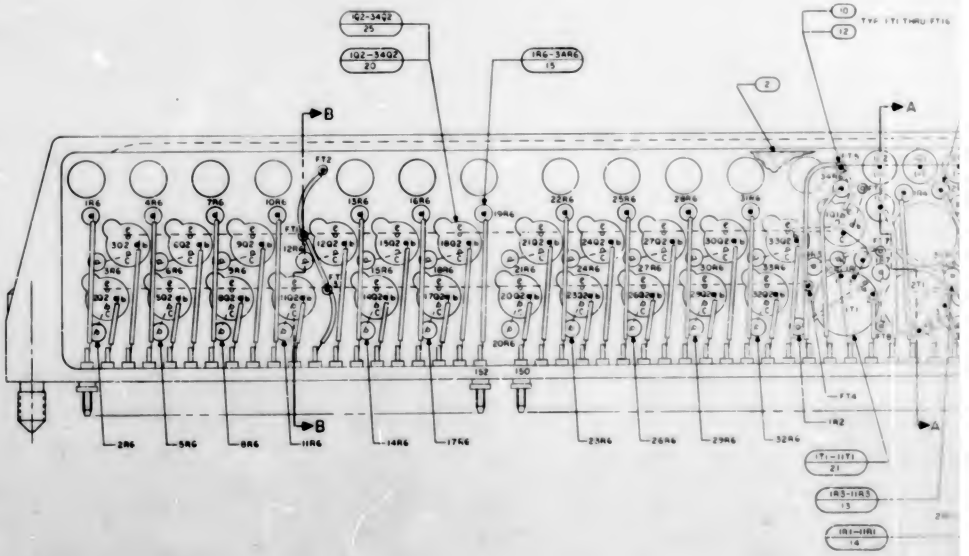




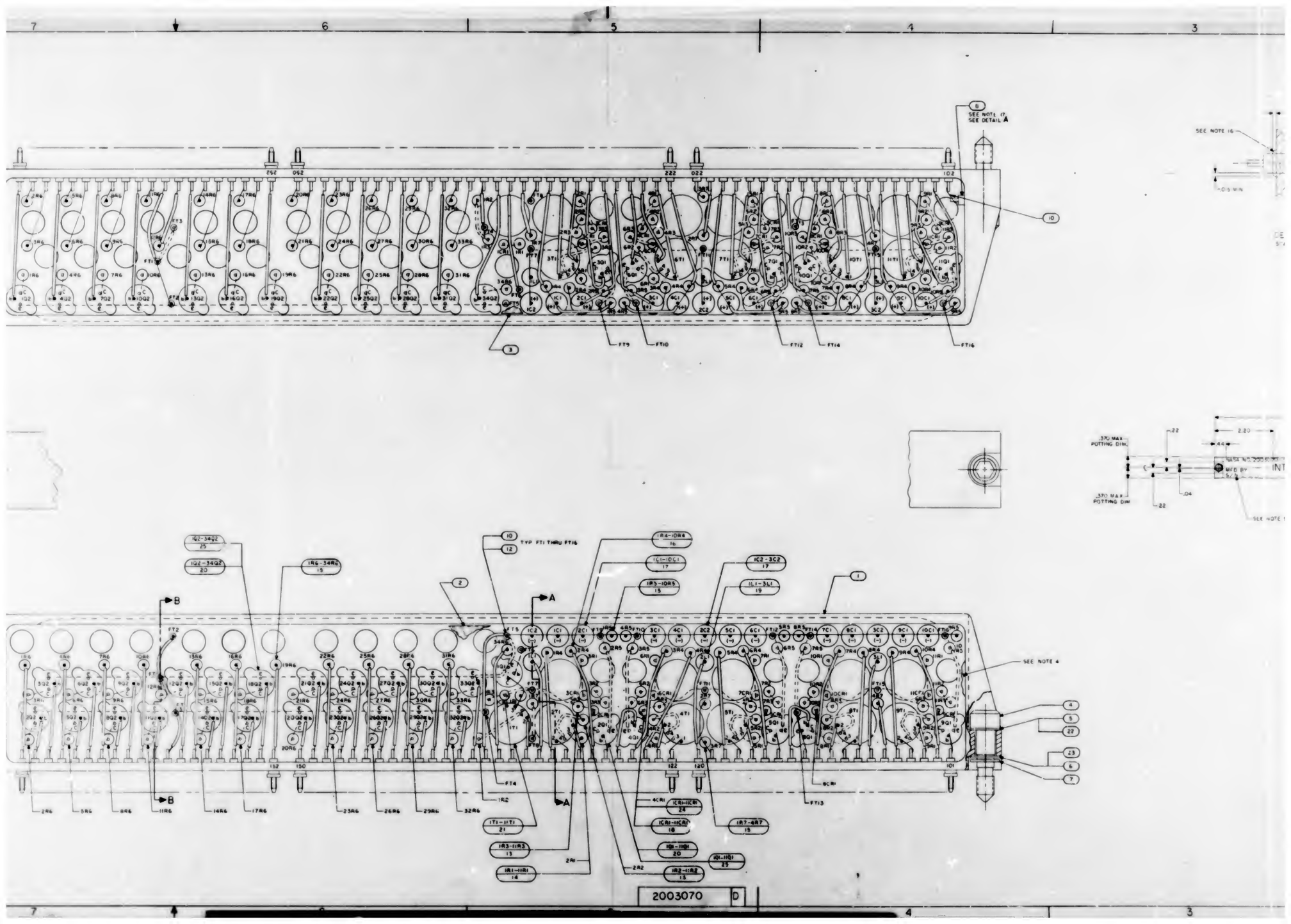
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. ENCAPSULATE PER ND1002002. REMOVE ALL FLASHING
5. MARK 20/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE III, CLASS D AND SERIALIZE PER ND1002023 USING INK 10[illegible]71-1
6. MARK 26/24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE III, CLASS 2, USING INK 1006271-1
7. AR DENOTES AS REQUIRED
8. FT DENOTES FEED THRU
9. K DENOTES CATHODE SIDE OF DIODE
10. + DENOTES POSITIVE SIDE OF CAPACITOR
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. STAKE FIND NO. 3 THRU FIND NO. 21, 24 AND 25 PER ND1002009 METHOD C OR D
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE XI
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S. 2003070
16. SEAL FIND NO. 8 TO FIND NO. 1 PER ND1002004, TYPE XI
17. MOUNTING TORQUE FOR FIND NO. 8 TO BE 15-20 INCH-OUNCES
18. FILL HOLE PER ND1002183. DO NOT EVALUATE AFTER FILLING
19. .OAT INDICATED SURFACES; BOTH ENDS TOP AND BOTTOM, AND BOTH SIDES PER ND1002187, TYPE II



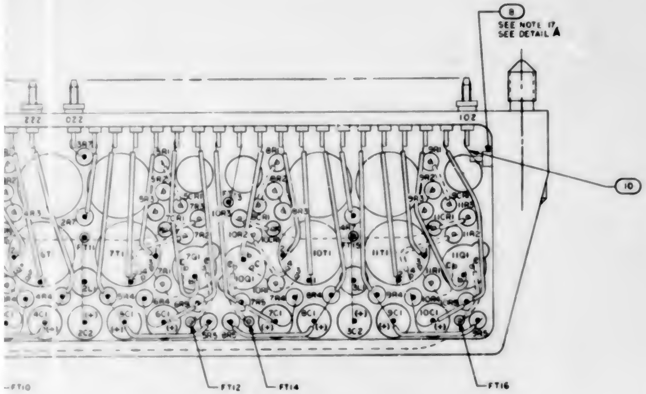
SECTION B-B

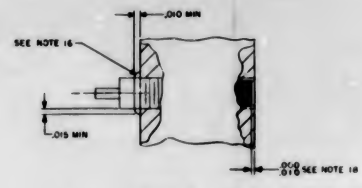


2003070 D

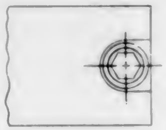

SEE NOTE 17, SEE DETAIL A
SEE NOTE 16
SEE NOTE 4
TYP FT1 THRU FT16
2003070
D

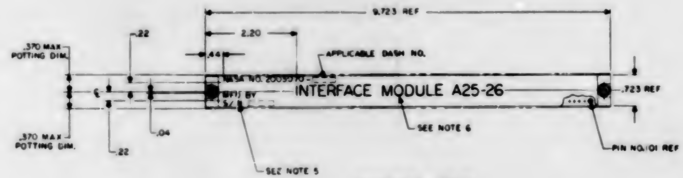
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 21851				
B		REVISED PER TDRR 23145				
C		REVISED PER TDRR 27309				
D		REVISED PER TDRR 32551				



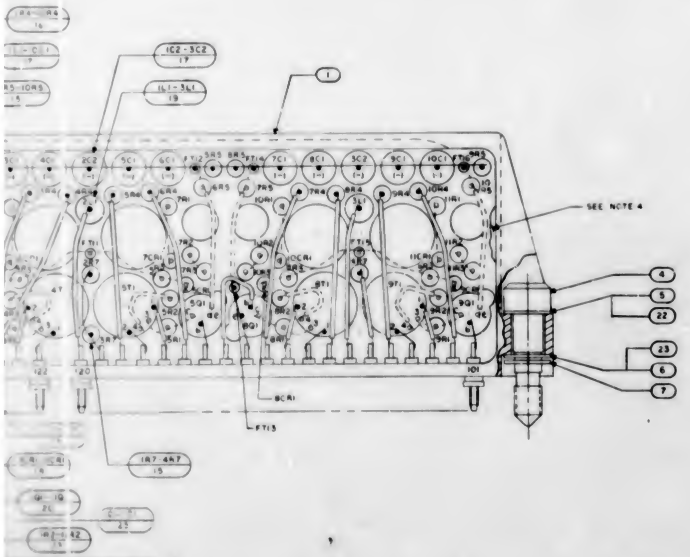


DETAIL A
SCALE 8/1





MARKING VIEW
SCALE 1/1



QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
—			2005021	SCHEMATIC	REF
	—	—	2005928	SCHEMATIC	REF
45	—	—	2004184-001	TRANSISTOR, POTTED	25
11	—	—	2004183-001	DIODE	24
2	2	—	2004984-003	WASHER, FLAT	23
2	2	—	2004984-001	WASHER, FLAT	22
11	11	11	1006319	TRANSFORMER	21
—	45	45	2004004-001	TRANSISTOR	20
3	3	3	1010406-6	COIL, RF CHOKE	19
—	11	11	2004103-001	DIODE	18
13	13	13	1006755-79	CAPACITOR	17
10	10	10	1006750-63	RESISTOR	16
48	48	48	1006750-39	RESISTOR	15
11	11	11	1006750-32	RESISTOR	14
22	22	22	1006750-8	RESISTOR	13
AR	AR	AR	1006776-22	INSULATION, SLEEVING	12
AR	AR	AR	1006776-21	INSULATION, SLEEVING	11
AR	AR	AR	1006757-8	WIRE, ELECTRICAL	10
AR	AR	AR	1006757-1	WIRE, ELECTRICAL	9
1	1	1	2004039	TERMINAL, THREADED	8
2	2	2	MS16633-4015	RING, RETAINING	7
—	—	2	1004546-3	WASHER, FLAT	6
—	—	2	1004546-1	WASHER, FLAT	5
2	2	2	1004579-1	SCREW, JACKING	4
1	1	1	2004137	INSULATOR B	3
1	1	1	2004136-011	INSULATOR A	2
1	1	1	2003006-011	HEADER HOUSING ASSY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	
2001100	

APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INTERFACE MODULE A25-26 ASSEMBLY

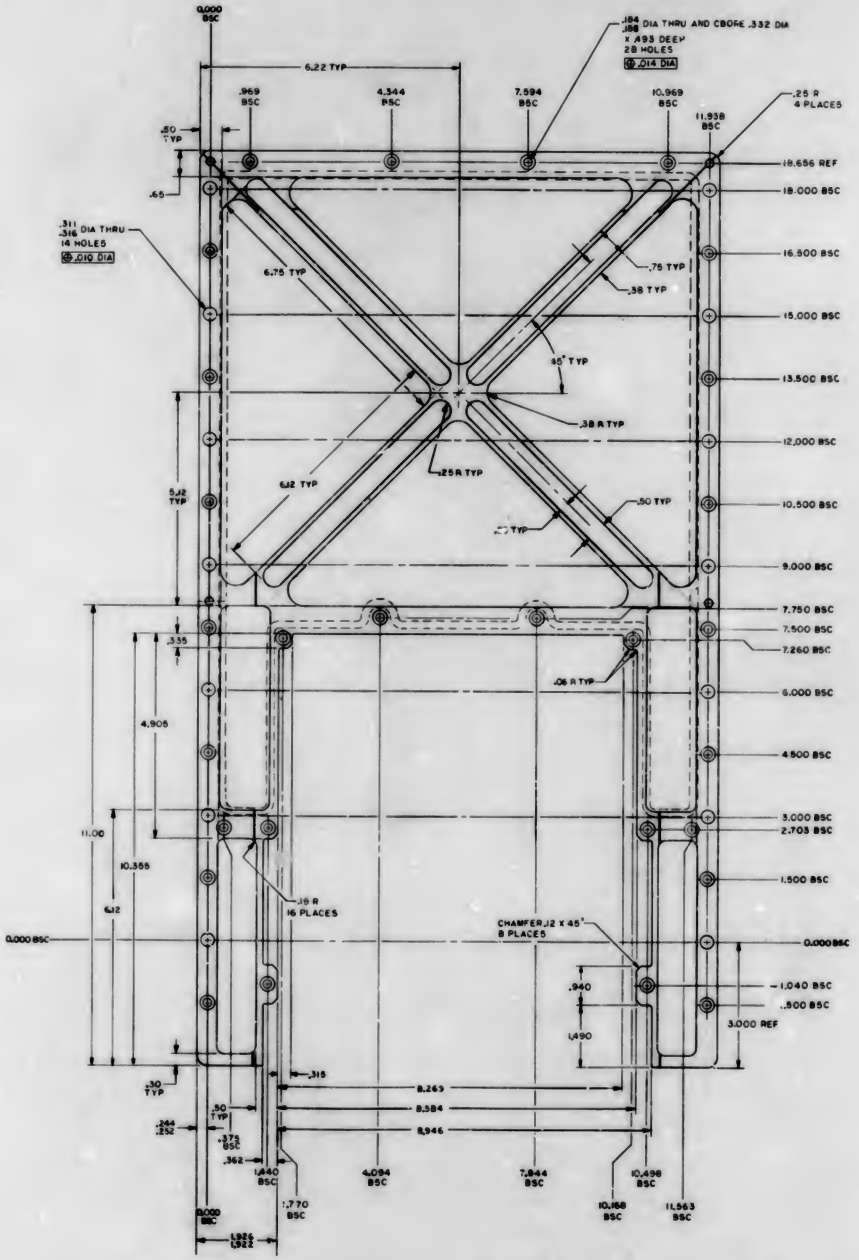
CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003070

SCALE 4/1 — SHEET 1 OF 1

2003070 D

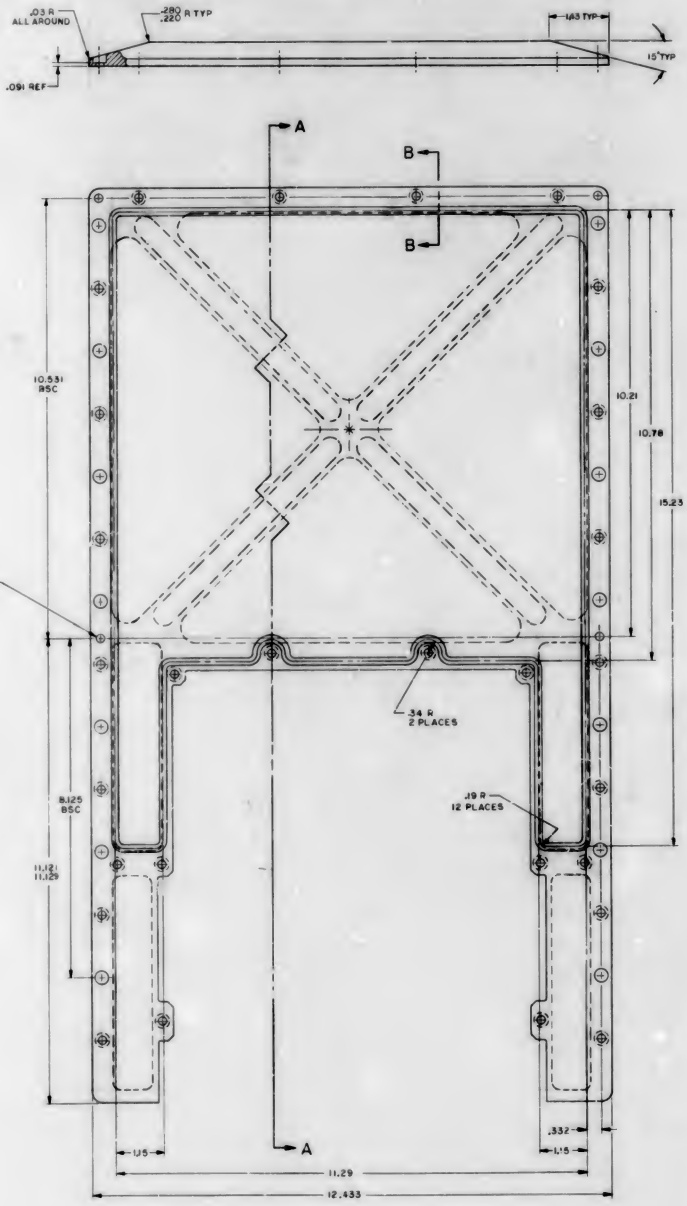
2003070

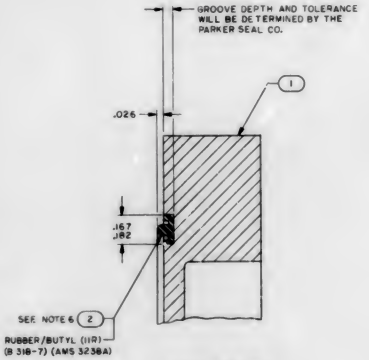
SECTION A-A



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: 6061-T6 AL PER QQ-A-250/11, TEMPER
3. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED
4. REMOVE BURRS AND SHARP EDGES .005/.015
5. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
6. FIND NO.2 TO BE MOLDED TO FIND NO.1 AS SHOWN
7. IDENTIFY WITH PART NO. PER ND1002019

2003071	A





SECTION B-B
SCALE 4/1

REVISIONS					
SYM	ZONE	DESCRIPTION	BY	CHK	DATE
A		REVISED PER TORA 22144			

QTY REQ	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	2003071-001	COVER B	
01		GASK-O-SEAL	

LIST OF MATERIALS

2003100	SEE NOTE 2	

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

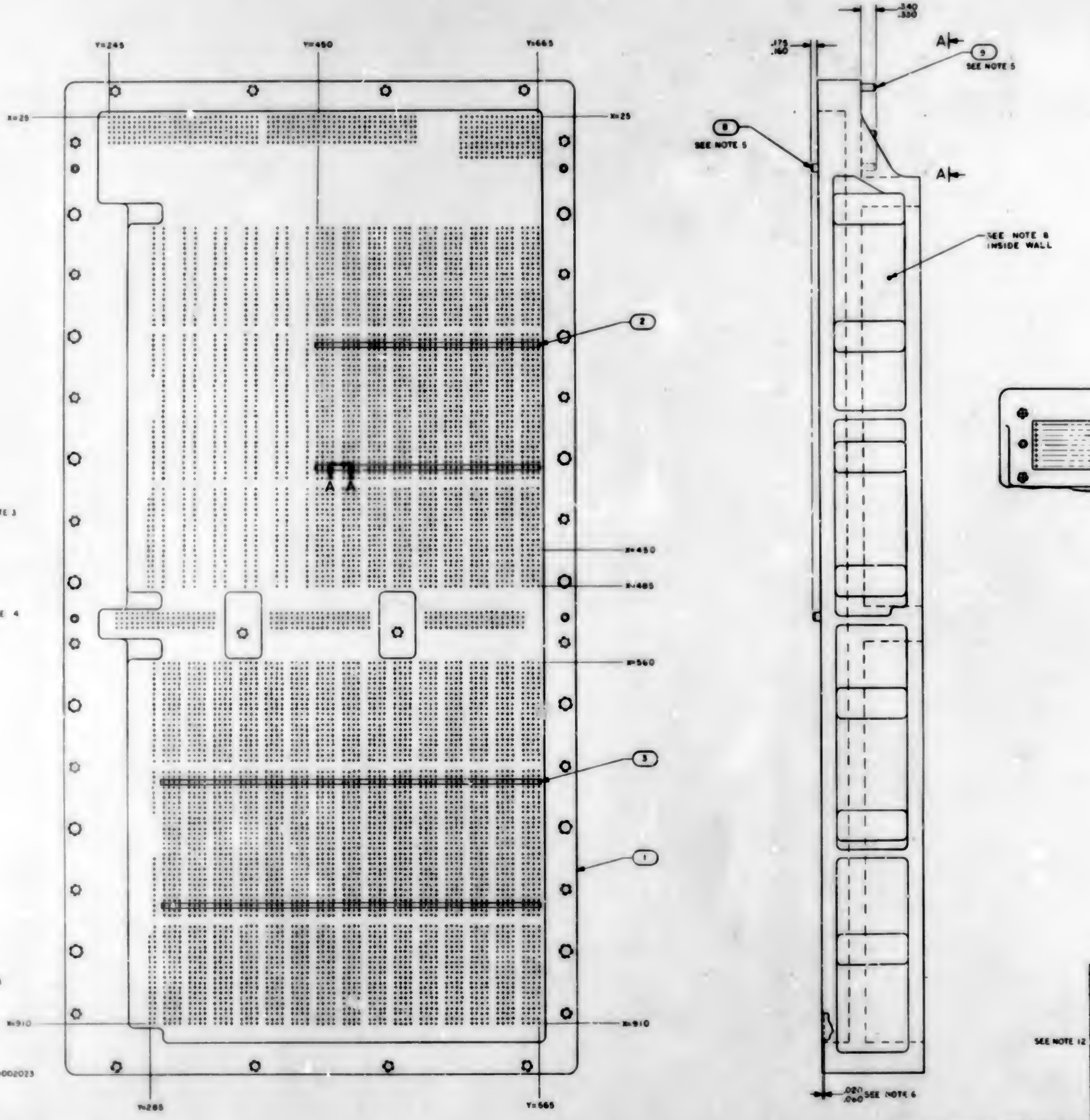
COVER B ASSEMBLY
AGC

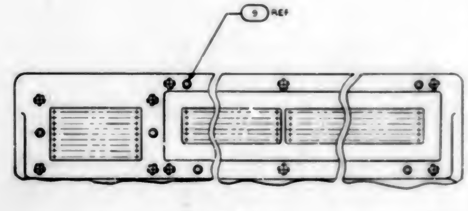
CAGE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003071

SCALE 1/1 SHEET 1 OF 1

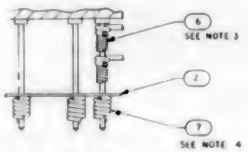
REVISIONS 21166

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 22618				
B		REVISED PER TDRR 23216				
C		REVISED PER TDRR 24499				
D		REVISED PER TDRR 25489				
E		REVISED PER TDRR 27082				





VIEW A-A



SECTION A-A
SCALE 5/1

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTED AS REQUIRED
3. WIREWRAP USING DRAWING NO 2005030 OR 2005033 AND PER ND1002031
4. ASSEMBLE FIND NO 2 AND 3 TO TERMINALS USING 4-7 TURNS OF FIND NO 7 (SEE NOTE 10)
5. INSTALL FIND NO 8 & FIND NO 9 AFTER WIREWRAPPING
6. ENCAPSULATE WIREWRAP SIDE PER ND1002217
7. TEMPORARY HOLDDOWN OF WIREWRAPPING PERMISSIBLE PRIOR TO ENCAPSULATING
8. IDENTIFY WITH PART NO PER ND1002019 APPROXIMATELY WHERE SHOWN AND SERIALIZE PER ND1002023
9. COORDINATES REFERENCE LOCATION OF PINS IN GARDNER-DENVER 14F-72 X 22 X UNIV-8 AUTOMATIC WIREWRAP MACHINE LANGUAGE, PALLET POSITION 6
10. SOLDER PER ND1002031 USING SOLDER PER ND1002075
11. WIRE SPECIFIED IN 2005030 OR 2005033 AS WIRES TO BE WRAPPED BY HAND IF ANY, TO BE ADDED AT THIS ASSY LEVEL
12. COLOR OF FIND NO.6 TO BE OPTIONAL

	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
X	–	2005033	WIRE WRAP DECK	REF
–	X	2005030	WIRE WRAP DECK	REF
6	6	MS16555-640	PIN, STRAIGHT HEADLESS	9
4	4	2004139	PIN, HEADLESS DOWEL	8
AR	AR	QQ-W-343 TYPE S	WIRE, 24 GAGE COATED SOFT	7
AR	AR	1006732	WIRE, ELEC, INS	6
				5
				4
2	2	2003081-011	BUS STRIP ASSY	3
2	2	2003080-011	BUS STRIP ASSY	2
1	1	2003062-011	TRAY A SUBASSY	1
-021	-011	LIST OF MATERIAL		

SEE NOTE 12 (find no. 6)

NEXT ASSY	USED ON
2003100	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

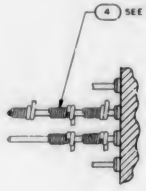
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TRAY A WIRED ASSEMBLY

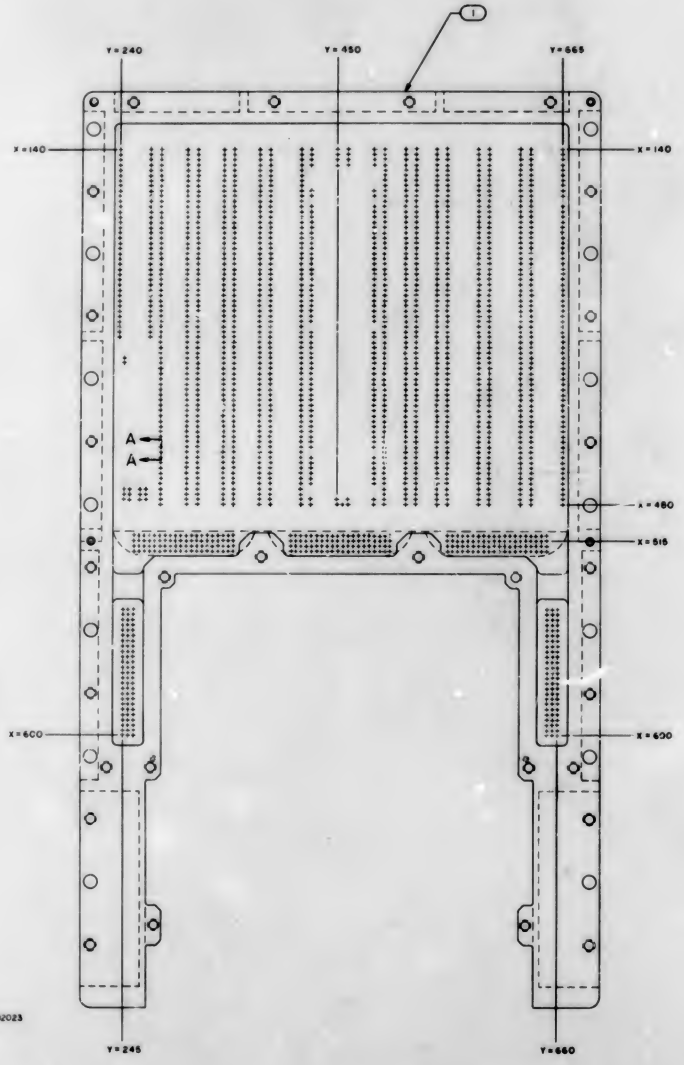
DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED NASA

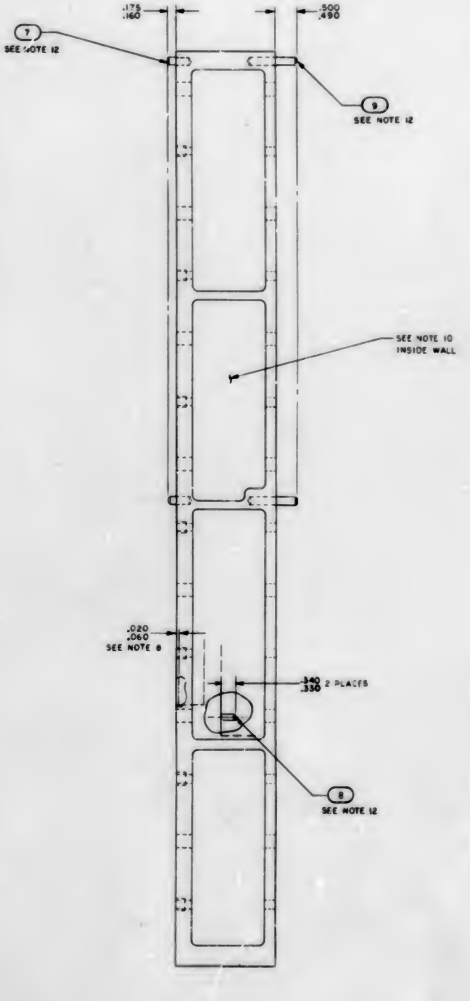
CODE IDENT NO 80230 | SIZE E | DRAWING NO. 2003074
SCALE 1/1 | SHEET 1 OF 1

2003074 E



SECTION A-A
SCALE 5/1
VIEW OF TYPICAL
WIREWRAPPING





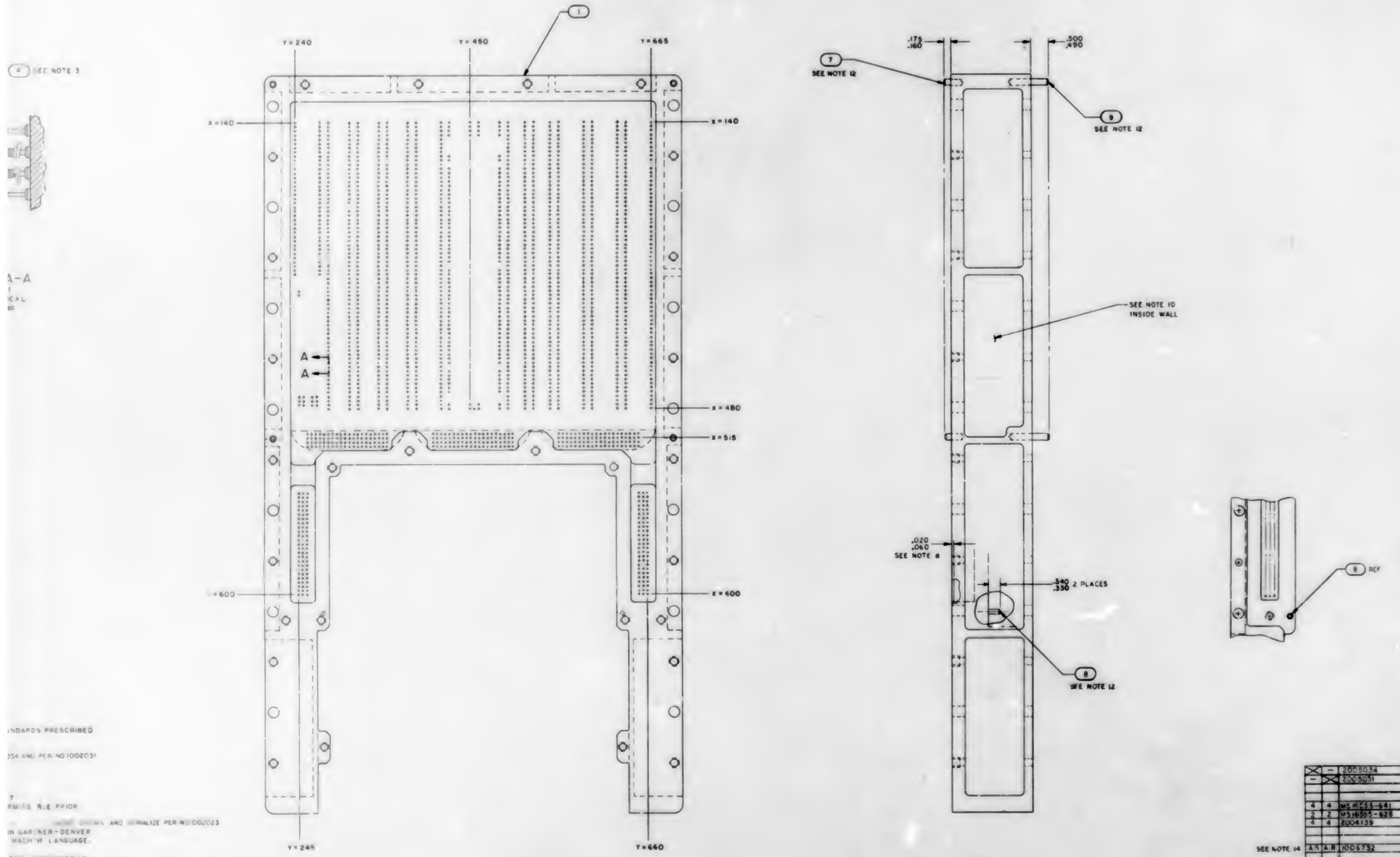
NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. WIREWRAP USING DRAWING NO. 2005031 OR 2005034 AND PER ND1002031
4.
5.
6.
7.
8. ENCAPSULATE WIREWRAP SIDE PER ND1002217
9. TEMPORARY HOLDDOWN OF WIREWRAPPING PERMISSIBLE PRIOR TO ENCAPSULATING
10. IDENTIFY WITH PART NO. [illegible] AND [illegible] APPROXIMATELY WHERE SHOWN, AND SERIALIZE PER ND1002023
11. COORDINATES REFERENCE LOCATION OF PINS IN GARDNER-DENVER 14F-22 X 22 X UNIV-B AUTOMATIC WIRE-WRAP MACHINE LANGUAGE, PALLET POSITION 6.
12. INSTALL FIND NO. 7, FIND NO. 8 AND FIND NO. 9 AFTER WIREWRAPPING
13. WIRES SPECIFIED IN 2005031 OR 2005034 AS WIRES TO BE WRAPPED BY HAND IF ANY, TO BE ADDED AT THIS ASSY LEVEL
14. COLOR OF FIND NO.4 TO BE OPTIONAL

SEE NOTE 14

2003075 D

2003100

SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 22618				
B		REVISED PER TDRR 23217				
C		REVISED PER TDRR 24502				
D		REVISED PER TDRR 25489				



...NDARDS PRESCRIBED

...034 AND PER ND1002031

...7
...RMISS ...LE PRIOR

... AND SERIALIZE PER ND1002023
...IN GARDNER-DENVER
... MACHINE LANGUAGE.

...RE WRAPPING
... BE WRAPPED BY HAND

X	—	2005034	WIRE WRAP DECK	REF
—	X	2005031	WIRE WRAP DECK	REF
4	4	MS16555-641	PIN, STRAIGHT HEADLESS	9
2	2	MS16555-628	PIN, STRAIGHT HEADLESS	8
4	4	2004139	PIN, HEADLESS DOWEL	7
				6
				5
A R	A R	1006732	WIRE, ELEC, INS	4
				3
				2
1	1	2003063-011	TRAY B SUBASSY	1
-021	-011		LIST OF MATERIALS	

SEE NOTE 14

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

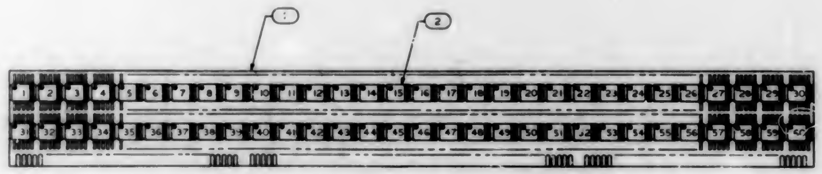
TRAY B WIRED ASSEMBLY

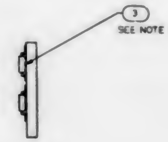
80230 J 2003075

2003075 D

E023100

003075 D





NOTE:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. APPLY FIND NO. 3 TO FIND NO. 1 IN AREA INDICATED.
3. WELD PER ND1002256.
4. IDENTIFY WITH PART NO PER ND1002019.
5. [symbol] SYMBOL SIGNIFIES OMISSION OF FIND NO. 2 IN POSITION INDICATED SEE TABLE, SHEET 2.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
AR	1006306-6	INSULATION TAPE, ELECT / ADHESIVE	3
AR	1004301-001	DUAL NOR GATE	2
AR	SEE TABLE SHEET 2	PRINTED CIRCUIT BOARD	1

LIST OF MATERIALS

2003121	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
DO NOT SCALE THIS DRAWING

MIT INSTRUMENTATION LAB

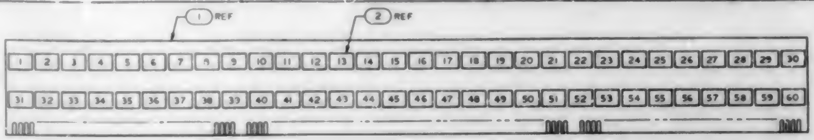
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MULTILAYER CIRCUIT BOARD ASSEMBLY (TABULATED)

CODE IDENT NO 80230 | SIZE E | DRAWING NO 2003086

SCALE 2/1 | SHEET 1 OF 2

2003086



FIND NO.	MODULE NO. (REF)	POSITION NUMBER (FIND NO. 2)	QUANTITY OF FIND NO. 2	ASSEMBLY PART NO.
2004520-001	A SH 1			2003086-011
-002	A1 SH 2			-021
-003	A2 SH 1			-031
-004	A2 SH 3			-041
-005	A3 SH 1			-051
-006	A3 SH 2			-061
-007	A4 SH 1			-071
-008	A4 SH 2			-081
-009	A5 SH 1			-091
-010	A5 SH 2			-111
-011	A6 SH 1			-121
-012	A6 SH 2			-131
-013	A7 SH 1			-141
-014	A7 SH 2			-151
-015	A8 - A11 SH 1			-161
-016	A8 - A11 SH 2			-171
-017	A12 SH 1			-181
-018	A12 SH 2			-191
-019	A13 SH 1			-211
-020	A14 SH 1			-221
-021	A14 SH 2			-231
-022	A15 SH 1			-241
-023	A15 SH 2			-251
-024	A16 SH 1			-261
-025	A16 SH 2			-271
-026	A17 SH 1			-281
-027	A17 SH 2			-291
-028	A18 SH 1			-311
-029	A18 SH 2			-321
-030	A19 SH 1			-331
-031	A19 SH 2			-341
-032	A20 SH 1			-351
-033	A20 SH 2			-361
-034	A21 SH 1, 2			-371
-035	A21 SH 3			-381
-036	A22 SH 1			-391
-037	A22 SH 2			-411
-038	A23 SH 1			-421
-039	A23 SH 2			-431
-040	A24 SH 1			-441
2004520-041	A24 SH 2			2003086-451

LIST OF MATERIALS

MIT INSTRUMENTATION LAB

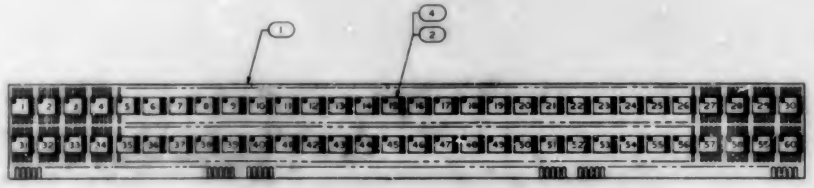
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

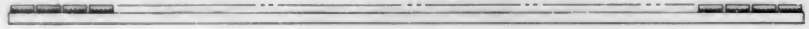
MULTILAYER CIRCUIT BOARD ASSEMBLY (TABULATED)

2003121

80230 | E | 2003086

SCALE 2/1 | SHEET 2 OF 2





NOTE:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. APPLY FIND NO. 3 TO FIND NO. 1 IN AREA INDICATED.
3. WELD PER NDI002256.
4. IDENTIFY WITH PART NO PER NDI002019.
5. ⊘ SYMBOL SIGNIFIES OMISSION OF FIND NO.2 OR FIND NO.4 IN POSITION INDICATED SEE TABLE, SHEET 2.
6. ⊠ SYMBOL SIGNIFIES USE OF FIND NO.4 IN POSITION INDICATED SEE TABLE, SHEET 2
7. ⊠ SYMBOL SIGNIFIES USE OF FIND NO.4 IN POSITION INDICATED SEE TABLE, SHEET 2

AR	1004301-002	DUAL NOR GATE EXPANDER	4
AR	2003989	INSULATION TAPE, ELECTRICAL	3
AR	1004301-001	DUAL NOR GATE	2
AR	SEE TABLE SHEET 2	PRINTED CIRCUIT BOARD	1
FIND NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	PER ASSY

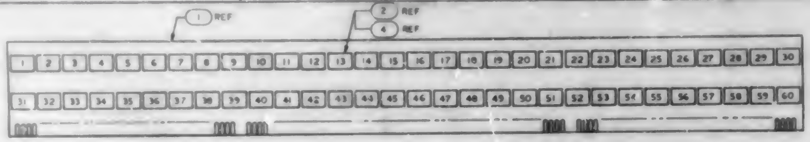
LIST OF MATERIALS

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

MULTILAYER CIRCUIT BOARD ASSEMBLY (TABULATED)

80280 E. 2003086



FIND NO. 1	MODULE NO. (REF)	POSITION NUMBER (FIND NO. 2 AND FIND NO. 4)	QUANTITY OF FIND NO. 2	ASSEMBLY PART NO.	QUANTITY OF FIND NO. 4
2004250-001	A1 SH 1	[illegible]	56	2003086-011	0
-002	A1 SH 2	[illegible]	58	-021	0
-003	A2 SH 1	[illegible]	57	-031	3
-004	A2 SH 2	[illegible]	52	-041	8
-005	A3 SH 1	[illegible]	51	-051	6
-006	A3 SH 2	[illegible]	37	-061	2
-007	A4 SH 1	[illegible]	49	-071	11
-008	A4 SH 2	[illegible]	47	-081	12
-009	A5 SH 1	[illegible]	40	-091	15
-010	A5 SH 2	[illegible]	40	-111	16
-011	A6 SH 1	[illegible]	46	-121	12
-012	A6 SH 2	[illegible]	38	-131	8
-013	A7 SH 1	[illegible]	54	-141	6
-014	A7 SH 2	[illegible]	52	-151	8
-015	A8 - A11 SH 1	[illegible]	52	-161	3
-016	A8 - A11 SH 2	[illegible]	52	-171	8
-017	A12 SH 1	[illegible]	47	-181	12
-018	A12 SH 2	[illegible]	57	-191	3
-019	A13 SH 1	[illegible]	44	-211	11
-020	A14 SH 1	[illegible]	45	-221	14
-021	A14 SH 2	[illegible]	46	-231	13
-022	A15 SH 1	[illegible]	47	-241	10
-023	A15 SH 2	[illegible]	48	-251	12
-024	A16 SH 1	[illegible]	56	-261	4
-025	A16 SH 2	[illegible]	55	-271	5
-026	A17 SH 1	[illegible]	57	-281	3
-027	A17 SH 2	[illegible]	52	-291	8
-028	A18 SH 1	[illegible]	57	-311	3
-029	A18 SH 2	[illegible]	53	-321	7
-030	A19 SH 1	[illegible]	59	-331	1
-031	A19 SH 2	[illegible]	59	-341	0
-032	A20 SH 1	[illegible]	56	-351	4
-033	A20 SH 2	[illegible]	56	-361	4
-034	A21 SH 1,2	[illegible]	40	-371	17
-035	A21 SH 3	[illegible]	58	-381	2
-036	A22 SH 1	[illegible]	52	-391	1
-037	A22 SH 2	[illegible]	56	-411	4
-038	A23 SH 1	[illegible]	51	-421	8
-039	A23 SH 2	[illegible]	57	-431	2
-040	A24 SH 1	[illegible]	57	-441	2
2004250-041	A24 SH 2	[illegible]	45	2003086-451	7

REVISIONS
A REVISED PER TDRR 27549

LIST OF MATERIALS

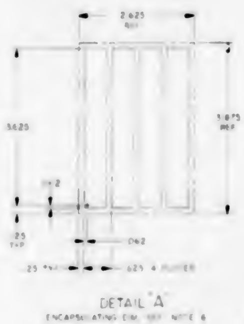
MIT INSTRUMENTATION LAB

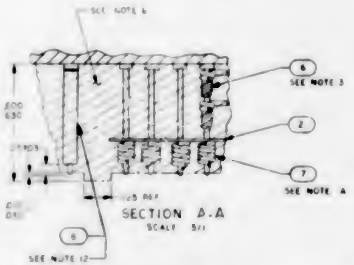
MANNED SPACECRAFT CENTER HOUSTON TEXAS

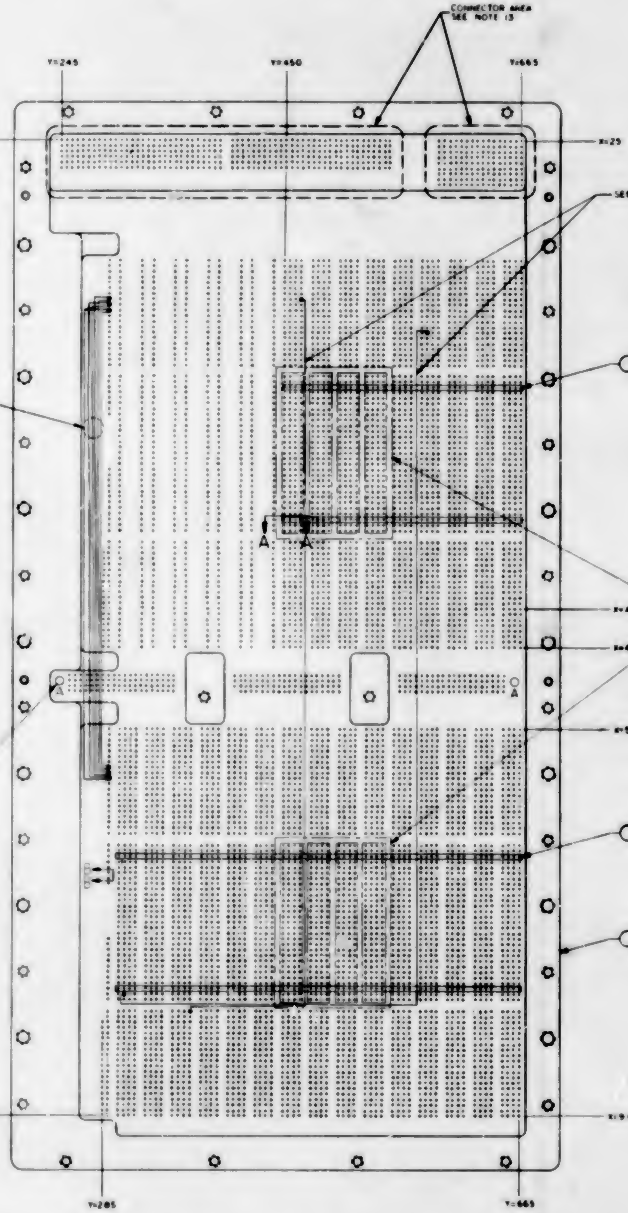
MULTILAYER CIRCUIT BOARD ASSEMBL (TABULATED)

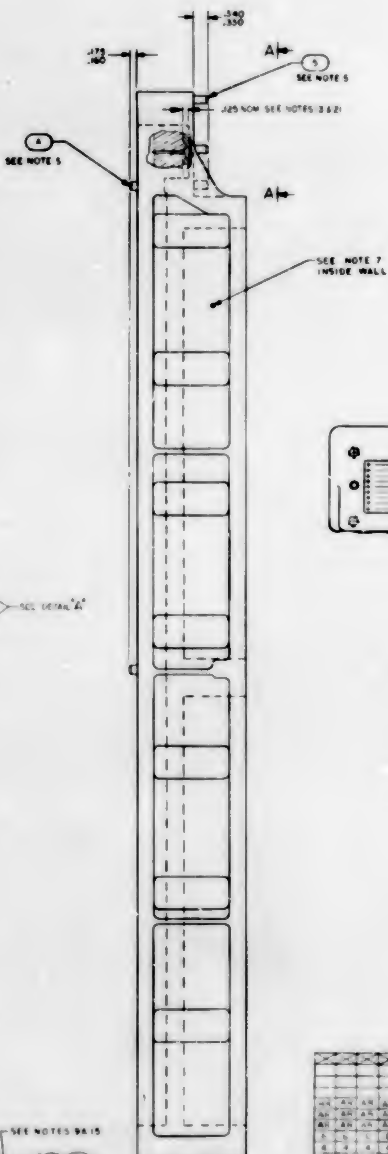
2003121

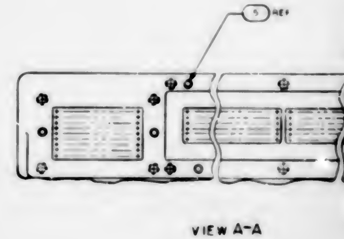
80230 E 2003066

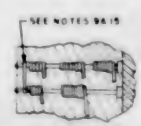












NOTE APPLICATION BLOCK	
DASH NO	APPLICABLE NOTE
-011	1 THRU 14,21
-021	1 THRU 14 SEE CHART "A" 21
-031	1 THRU 14 SEE CHART "B" 21
-041	1 THRU 14,18 SEE CHART "C" 21
[illegible]	1 THRU 15,19 SEE CHART "D" 21
[illegible]	1 THRU 14, SEE CHART "E" 21
[illegible]	1 THRU 14,19 SEE CHART "F" 21

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. WIREWRAP USING DRAWING NO 2005037 AND PER ND1002031
4. ASSEMBLE FIND NO. 2 AND 3 TO TERMINALS USING 4-7 TURNS OF FIND NO. 7(SEE NOTE 9)
5. INSTALL FIND NO 4 (FIND NO 5) AFTER ~~WIREWRAPPING~~
6. ENCAPSULATE WIREWRAP SIDE PER ND1002295
7. IDENTIFY WITH PART NO PER ND1002019 APPROXIMATELY WHERE SHOWN AND SERIALIZE PER ND1002023
8. COORDINATES REFERENCE LOCATION OF PINS IN GARDNER-DENVER 14F-22 X 22 X UNIV-8 AUTOMATIC WIREWRAP MACHINE LANGUAGE, PALLET POSITION 6
9. SOLDER PER ND1002071 USING SOLDER PER ND1002075
10. WIRE SPECIFIED IN 2005037 AS "WIRES TO BE WRAPPED BY HAND," IF ANY TO BE ADDED AT THIS ASSY LEVEL
11. TEMPORARY HOLDDOWN OF WIREWRAPPING PERMISSIBLE PRIOR TO ENCAPSULATING
12. SLEEVE ALL WRAPPOSTS NOT WIREWRAPPED USING FIND NO 8
13. ENCAPSULATE CONNECTOR AREAS ONLY, TO DIM SHOWN PER ND1002183, TYPE III
14. TOLERANCE OF THRU HOLES IN POTTING TO BE ±.020
15. REMOVE SLEEVING FROM FIND NO 6, WRAP AND SOLDER FROM PIN NO 1AA TO PIN NO 1A5 TYPICAL TWO PLACES, A30 AND A31.
16. ~~[illegible]~~
17. ~~[illegible]~~
18. INSTALL WIRES AS SHOWN
19. MAKE FROM 2003092-021
20. MAKE FROM 2003092-031
21. POTTING DEPTH MAY VARY FROM .090/.200 DUE TO SURFACE IRREGULARITIES

REVISIONS					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE
A		REVISED PER TDRR 27356			
B		REVISED PER TDRR [illegible]			
C		REVISED PER TDRR 29422			
D		REVISED PER TDRR [illegible]			
E		REVISED PER TDRR 32393			
F		REVISED PER TDRR 3256			
G		REVISED PER TDRR [illegible]			
H		REVISED PER TDRR 34221			
J		REVISED PER TDRR [illegible]			
K		REVISED PER TDRR 34591			
L		REVISED PER TDRR 3526?			

						QTY	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO
							2005037	WIRE WRAP DECK (SEE NOTE APPL BLOCK)	
AR	AR	AR	AR	AR	AR	AR	1006176-21	INSULATION, SLEEVING	8
AR	AR	AR	AR	AR	AR	AR	QQ-W-343 TYPE S	WIRE, AWG 24 COATED SOFT	7
AR	AR	AR	AR	AR	AR	AR	[illegible]-003	WIRE, ELEC, INS	6
6	6	6	6	6	6	6	MS[illegible]555 640	PIN, STRAIGHT HEADLESS	5
4	4	4	4	4	4	4	2004139	PIN, HEADLESS DOWEL	4
2	2	2	2	2	2	2	2003?91-011	BUS STRIP ASSY	3
2	2	2	2	2	2	2	2003090-011	BUS STRIP ASSY	2
1	1	1	1	1	1	1	2003090-011	TRAY A SUBASSY	1

LIST OF MATERIAL

NEXT ASSY	USED ON
2003393	
2003200	

APPLICATION

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TRAY A WIRED ASSEMBLY

CODE IDENT NO 80230 | SIZE E | DRAWING NO 2003092

SCALE 1/1 | SHEET 1 OF 2

SYM	DESCRIPTION	DATE	APPROVAL
J	THIS SHEET ADDED TDRR 34222		
K	REVISED PER TDRR 345[illegible]		
L	REVISED PER TDRR [illegible]		

"A" CHART FOR -021

SEE NOTE 18

"B" CHART FOR -031

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS USING FIND NO. 6			
SIGNAL	FROM	TO	# LEVEL	SIGNAL	FROM	TO	# LEVEL
ØVDCA	A14/253	A13/246	3	ØVDCA	A13/246	A14/170	3
ØVDCA	A14/170	A14/253	1	MAMU	A14/253	A52/906	3
W0243	A30/145	A[illegible]6	3	+28COM	A[illegible]/106	A30/144	1
W0243	A30/145	A[illegible]	2		A[illegible]/106	A[illegible]	2
W0243	A30/145	A[illegible]	1		A[illegible]/106	A30/[illegible]	3
W0355	A31/145	A[illegible]/107	3		A[illegible]	A[illegible]/143	1
W0355	A31/145	A[illegible]/107	2		A51/107	A29/[illegible]	2
W0355	A31/145	A51/107	1	+28COM	A51/107	A31/143	2

"C" CHART FOR -041

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	# LEVEL	SIGNAL	FROM	TO	# LEVEL
FUTEXT	A12/162	A[illegible]/213	2	ØVDCA	A12/162	A23/219	2
+28COM	A3[illegible]/163	A31/163	1	ØVDCA	A23/219	A2[illegible]/158	3
+28COM	A30/162	A31/162	1	FUTEXT	A03/213	A23/223	3
+28COM	A30/162	A31/163	2	T7PHS4	A2[illegible]/222	A[illegible]	2
+28COM	A30/163	A31/164	2	+28COM	A30/163	A31/163	1
+28COM	A[illegible]/164	A31/164	1	+28COM	A30/162	A31/162	1
+28COM	A[illegible]/164	A31/162	2	+28COM	A30/162	A31/163	2
UPRUPT	A15/323	A1[illegible]/3[illegible]	3	+28COM	A[illegible]	A31/164	2
WATCHP	A24/164	A1[illegible]/120	3	+28COM	A30/164	A31/164	1
				+28COM	A30/164	A31/162	2
				UPRUPT	A[illegible]/323	A[illegible]/358	3
				WATCHP	A[illegible]	A[illegible]/120	3
STRT1	A52/601	A02/240	1	DLY4	A30/129	A30/125	3
STRT2	A52/602	A61/409	1	DLY14	A31/129	A31/124	3
ALGA	A52/507	A02/237	1	+4SWB	A30/130	A30/216	3
				D207	A25/128	A26/118	3
ØVDCA	A14/253	A13/246	3	ØVDCA	A13/246	A14/170	3
ØVDCA	A14/170	A14/253	1	MAMU	A14/253	A52/906	3
W0243	A30/145	A51/106	3	+28COM	A51/106	A30/144	1
W0243	A30/145	A51/106	2		A51/106	A29/[illegible]	2
W0243	A30/145	A51/106	1		A51/106	A30/143	3
W0355	A31/145	A51/107	3		A51/107	A[illegible]/143	1
W0355	A31/145	A51/107	2		A51/107	A29/164	2
W0355	A31/145	A51/107	1	+28COM	A51/107	A31/144	3

SEE NOTE 18

"D" CHART FOR -051 SEE NOTE 19

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	# LEVEL	SIGNAL	FROM	TO	# LEVEL
FUTEXT	A12/162	A03/213	2	ØVDCA	A12/162	A23/219	2
				ØVDCA	A23/219	A2[illegible]/158	3
				FUTEXT	A03/213	A23/223	3
				T7PHS4	A23/222	A23/30[illegible]	2
				DLY4	A30/129	A30/125	3
				DLY14	A31/129	A31/124	3
				+4SWB	A30/130	A30/216	3
				D207	A25/128	A26/118	3
ØVDCA	A14/253	A13/246	3	MAMU	A14/253	A52/906	3
ØVDCA	A14/170	A14/253	1	ØVDCA	A13/246	A14/170	3

"E" CHART FOR -061 SEE NOTE 20

DELETE FOLLOWING CONNECTION				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	# LEVEL	SIGNAL	FROM	TO	# LEVEL
FUTEXT	A12/162	A03/213	2	ØVDCA	A12/162	A23/219	2
				ØVDCA	A23/219	A23/158	3
				FUTEXT	A03/213	A23/223	3
				T7PHS4	A23/222	A23/30[illegible]	2
				DLY4	A30/129	A30/125	3
				DLY14	A31/129	A31/124	3
				+4SWB	A30/130	A30/216	3
				D207	A25/128	A26/118	3

"F" CHART FOR -071

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	# LEVEL	SIGNAL	FROM	TO	# LEVEL
FUTEXT	A12/162	A03/213	[illegible]	ØVDCA	A12/162	A23/219	2
+28COM	A30/163	A31/163	[illegible]	ØVDCA	A23/219	A23/158	3
+28COM	A30/162	A31/162	1	FUTEXT	A03/213	A23/223	3
+28COM	A30/162	A31/163	2	T7PHS4	A23/222	A23/30[illegible]	2
+28COM	A30/163	A31/164	2	+28COM	A30/163	A31/163	1
+28COM	A30/164	A31/164	1	+28COM	A30/162	A31/162	1
+28COM	A30/164	A31/162	2	+28COM	A30/162	A31/163	2
UPRUPT	A15/323	A19/3[illegible]	3	+28COM	A30/163	A31/164	2
WATCHP	A24/164	A13/120	3	+28COM	A30/164	A31/164	1
				+28COM	A30/164	A31/162	2
				UPRUPT	A1[illegible]/323	A19/358	3
				WATCHP	A24/164	A13/120	3
STRT1	A52/601	A02/240	1	DLY4	A30/129	A30/125	3
STRT2	A52/602	A61/409	1	DLY14	A31/129	A31/124	3
ALGA	A52/507	A02/237	1	+4SWB	A30/130	A30/216	3
				D207	A25/128	A26/118	3
ØVDCA	A14/253	A13/246	3	ØVDCA	A13/246	A14/170	3
ØVDCA	A14/170	A14/253	1	MAMU	A14/253	A52/906	3
W0243	A30/145	A51/106	3	+28COM	A51/106	A30/144	1
W0243	A30/145	A51/106	2		A51/106	A29/164	2
W0243	A30/145	A51/106	1		A51/106	A30/143	3
W0355	A31/145	A51/107	3		A51/107	A31/143	1
W0355	A31/145	A51/107	2		A51/107	A29/164	2
W0355	A31/145	A51/107	1	+28COM	A51/107	A31/144	3
ST	A14/417	A02/102	2	ØVDCA	A14/417	A14/360	3

SEE NOTE 18

J THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN

CHECKED

APPROVAL

APPROVAL

NASA APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

TRAY A WIRED ASSEMBLY

CODE IDENT NO 80230 SIZE E NASA DRAWING NO 2003[illegible]2

SCALE NONE SHEET OF

'A' CHART FOR -021

SEE NOTE 18

'B' CHART FOR -031

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS SEE NOTE 6			
SIGNAL	FROM	TO	Z LEVEL	SIGNAL	FROM	TO	Z LEVEL
0VDCA	A14/253	A13/[illegible]	[illegible]	0VDCA	A13/[illegible]	A14/170	3
0VDCA	A14/170	A14/[illegible]	[illegible]	MA[illegible]	A1[illegible]	A52/[illegible]	[illegible]
*D243	A[illegible]/145	A[illegible]	3	+[illegible]	A[illegible]	A[illegible]	[illegible]
*D243	A30/145	A[illegible]	[illegible]	↓	A[illegible]	A[illegible]	[illegible]
*D243	A30/145	[illegible]	[illegible]		A[illegible]	A[illegible]	[illegible]
*D399	A31/144	[illegible]	[illegible]		A[illegible]	A[illegible]	[illegible]
*D399	A31/145	A[illegible]	[illegible]	↓	A51/10[illegible]	A2[illegible]	2
*D399	A31/145	A5[illegible]	[illegible]	+[illegible]	A51/107	A31/[illegible]	2

'C' CHART FOR -0[illegible]1

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	Z LEVEL	SIGNAL	FROM	TO	Z LEVEL
FUTEXT	A12/162	A[illegible]	2	0VDCA	A12/162	A23/219	2
+28COM	A3[illegible]	A31/163	1	0VDCA	A23/219	A23/158	3
+28COM	A30/162	A31/162	1	FUTEXT	A03/213	A23/223	3
+28COM	A3[illegible]	A31/163	2	T7PHS4	A23/222	A[illegible]	2
+28COM	A3[illegible]/163	A31/164	2	+28COM	A30/163	A31/163	1
+28COM	A30/164	A31/164	1	+28COM	A30/162	A31/162	1
+28COM	A3[illegible]	A31/162	2	+28COM	A30/162	A31/163	2
PHUPT	A1[illegible]/323	A19/3[illegible]	3	+28COM	A3[illegible]	A31/164	2
WATCHP	A24/164	A1[illegible]	3	+28COM	A30/164	A31/164	1
				+28COM	A30/164	A31/162	2
				UPRUPT	A19/323	A19/358	3
				WATCHP	A24/164	A13/120	3
STRT1	A52/60	A02/240	1	DLY4	A30/129	A30/125	3
STRT2	A52/[illegible]	A01/4[illegible]	1	DLY14	A31/129	A31/124	3
ALGA	A52/[illegible]	A02/237	1	+4SWB	A30/130	A30/216	3
				D2CT	A25/128	A26/118	3
0VDCA	A14/253	A13/246	3	0VDCA	A13/246	A14/170	3
0VDCA	A14/170	A14/253	1	MAMU	A14/253	A52/[illegible]	3
*D243	A31/145	A31/106	3	+28COM	A31/106	A30/144	[illegible]
*D243	A30/145	A31/106	2	↓	A31/106	A29/[illegible]	[illegible]
*D243	A30/145	A[illegible]	1		A31/106	A31/43	3
*D399	A31/145	A[illegible]	1		A31/107	A31/43	1
*D399	A31/144	A[illegible]	2	↓	A31/107	A29/164	2
*D399	A31/145	A[illegible]	[illegible]	+28COM	A31/107	A31/44	3

SEE NOTE 18

'D' CHART FOR -051 SEE NOTE 19

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	Z LEVEL	SIGNAL	FROM	TO	Z LEVEL
FUTEXT	A12/162	A[illegible]	[illegible]	0VDCA	A12/162	A23/219	2
				0VDCA	A23/219	A23/158	3
				FUTEXT	A03/213	A23/213	3
				T7PHS4	A23/222	A[illegible]	[illegible]
				DLY4	A30/129	A30/125	3
				DLY14	A31/129	A31/124	3
				+4SWB	A30/130	A30/216	3
				D2CT	A25/128	A26/118	3
0VDCA	A14/253	A13/246	3	MAMU	A14/253	A52/206	3
0VDCA	A14/170	A14/253	1	0VDCA	A13/246	A14/170	3

'E' CHART FOR -061 SEE NOTE 20

DELETE FOLLOWING CONNECTION				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	Z LEVEL	SIGNAL	FROM	TO	Z LEVEL
FUTEXT	A12/162	A[illegible]3/213	2	0VDCA	A12/162	A23/219	2
				0VDCA	A23/219	A23/158	3
				FUTEXT	A[illegible]/213	A23/223	3
				T7PHS4	A23/222	A23/[illegible]	2
				DLY4	A30/129	A30/125	3
				DLY14	A31/129	A31/124	3
				+4SWB	A30/130	A30/216	3
				D2CT	A25/125	A26/118	3

'F' CHART FOR -071

DELETE FOLLOWING CONNECTIONS				ADD FOLLOWING CONNECTIONS			
SIGNAL	FROM	TO	Z LEVEL	SIGNAL	FROM	TO	Z LEVEL
FUTEXT	A12/162	A23/213	2	0VDCA	A12/162	A23/219	2
+28COM	A30/163	A31/163	1	0VDCA	A23/219	A23/158	3
+28COM	A30/162	A31/162	1	FUTEXT	A[illegible]/213	A23/223	3
+28COM	A30/162	A31/163	2	T7PHS4	A23/222	A23/[illegible]	2
+28COM	A[illegible]/163	A31/164	2	+28COM	A30/163	A31/163	1
+28COM	A30/164	A31/164	1	+28COM	A30/162	A31/162	1
+28COM	A31/164	A31/162	2	+28COM	A30/162	A31/163	2
PHUPT	A[illegible]/323	A19/3[illegible]	3	+28COM	A3[illegible]/163	A31/164	2
WATCHP	A24/164	A13/120	3	+28COM	A31/164	A31/164	1
				+28COM	A30/164	A31/162	2
				UPRUPT	A19/323	A19/358	3
				WATCHP	A24/164	A13/120	3
STRT1	A52/60	A02/240	1	DLY4	A30/129	A30/125	3
STRT2	A52/[illegible]2	A01/405	1	DLY14	A31/129	A31/124	3
ALGA	A52/[illegible]	A02/237	1	+4SWB	A30/130	A30/216	3
				D2CT	A25/128	A26/118	3
0VDCA	A14/253	A13/246	3	0VDCA	A13/246	A14/170	3
0VDCA	A14/170	A14/253	1	MAMU	A14/253	A52/[illegible]	3
*D243	A31/145	A[illegible]/106	3	+28COM	A[illegible]	A[illegible]/44	
*D243	A30/145	A31/106	2	↓	A31/106	A29/16[illegible]	2
*D243	A30/145	A31/106	1		A31/106	A30/143	3
*D399	A31/145	A[illegible]/107	3		A31/107	A31/43	1
*D399	A3[illegible]/145	A31/107	2	↓	A31/107	A29/164	2
*D399	A3[illegible]/145	A3[illegible]/107	1	+28COM	A31/107	A31/144	3
AT	A14/417	A02/152	2	0VDCA	A14/417	A14/340	3

SEE NOTE 18

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
[illegible]	[illegible]	[illegible]	[illegible]
K	[illegible]	[illegible]	[illegible]
L	[illegible]	[illegible]	[illegible]

J THIS SHEET A[illegible]

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

M.I.T. INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN · DATE · CHECKED · APPROVAL · APPROVAL

NASA APPROVAL

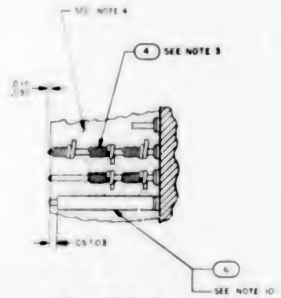
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

TRAY A WIRED ASSEMBLY

CODE IDENT NO 80230 · SIZE E · NASA DRAWING NO 2003[illegible]

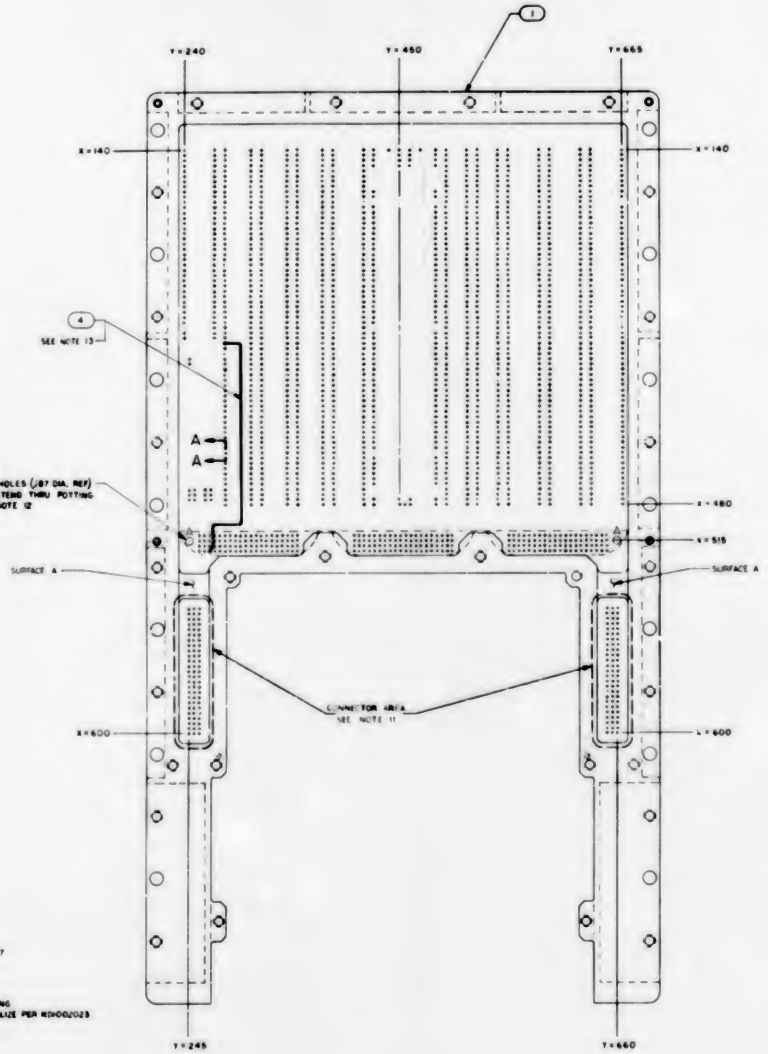
SCALE · SHEET

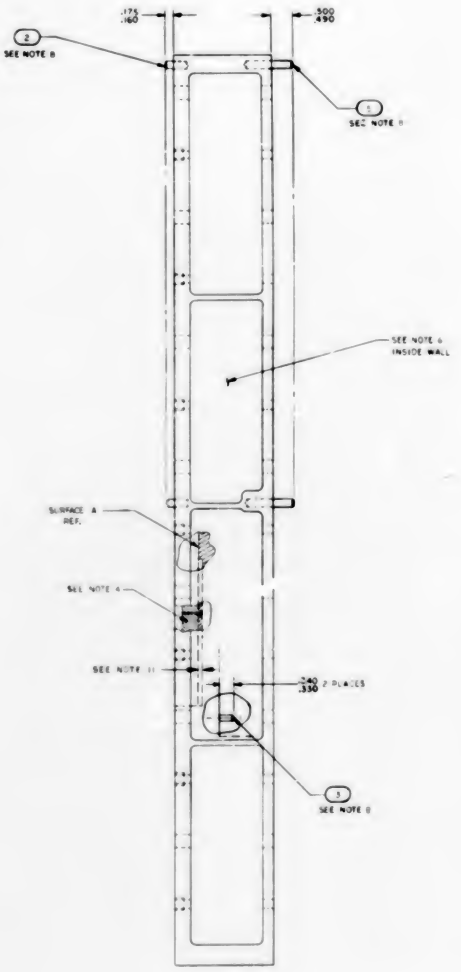


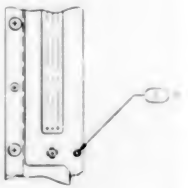
SECTION A-A
SCALE 5/1
VIEW OF TYPICAL
WIREWRAPPING

CHART A			
DELETE (02 ONLY)			
SIGNAL	FROM	TO	LEVEL
SCAFAL	2G1/103	86/232	Z 1
ADD (02 ONLY)			
SIGNAL	FROM	TO	LEVEL
SCAFAL	86/UTC 3	86/232	Z 3

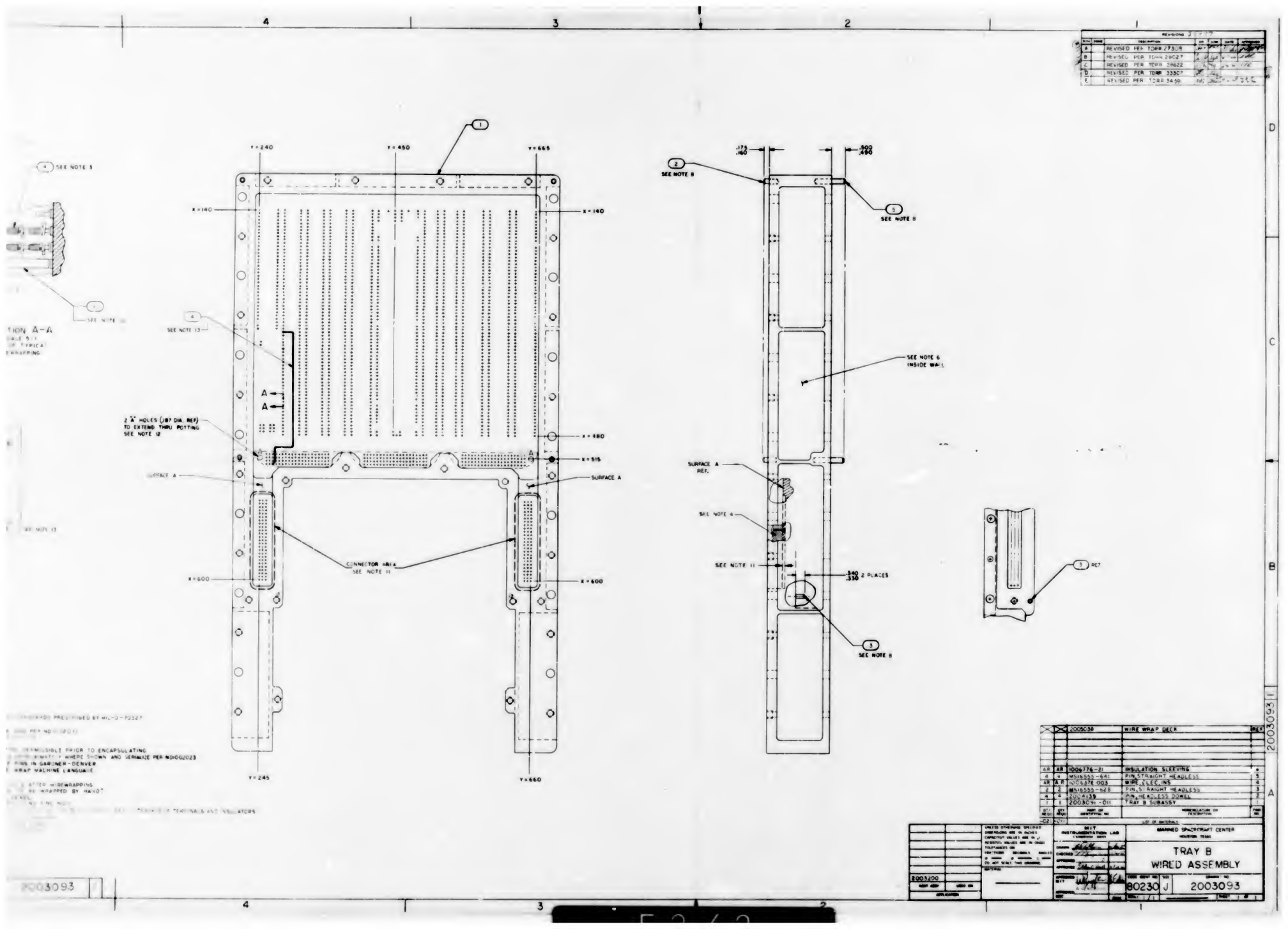
SEE NOTE 13





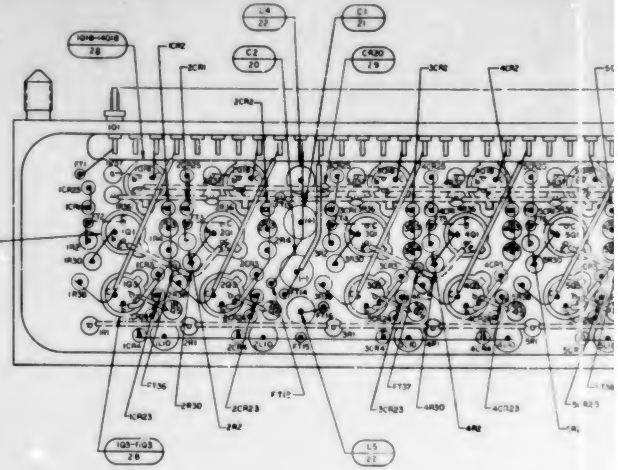


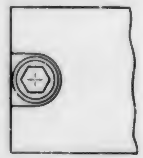
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. WIREWRAP USING DRAWING NO. 2005038 AND PER ND1002031
4. ENCAPSULATE WIREWRAP SIDE PER ND 1002295
5. TEMPORARY HOLDDOWN OF WIREWRAPPING PERMISSIBLE PRIOR TO ENCAPSULATING.
6. IDENTIFY WITH PART NO. PER ND1002019 APPROXIMATELY WHERE SHOWN AND SERIALIZE PER ND1002023
7. COORDINATES REFERENCE LOCATION OF PINS IN GARDNER-DENVER
   149-22 X 22 X UNIV B AUTOMATIC WIRE WRAP MACHINE LANGUAGE,
   PALLET POSITION 6.
8. INSTALL FIND NO 2, FIND NO 3 AND FIND NO 5 AFTER WIREWRAPPING.
9. WIRES SPECIFIED IN 2005038 AS "WIRES TO BE WRAPPED BY HAND",
   IF ANY, TO BE ADDED AT THIS ASSY LEVEL.
10. SLEEVE ALL WRAPPOSTS NOT WIREWRAPPED USING FIND NO 6
11. ENCAPSULATE CONNECTOR AREAS ONLY, PER ND1002013, TYPE III, POTTING TO SEAL INTERFACE OF TERMINALS AND INSULATORS
    IMPERVIOUS AND MAY EXTEND FLUSH TO SURFACE A MAXIMUM
12. DIAMETER OF THRU HOLES IN POTTING TO BE ±.020
13. INSTALL FIND NO 4 AS SHOWN PER CHART A (02 ONLY)

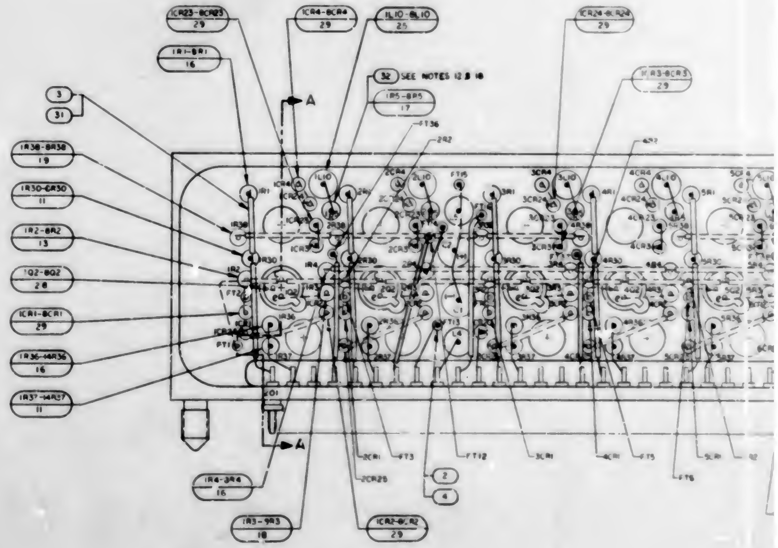

REVISIONS
A REVISED PER TDRR 27318
B REVISED PER TDRR 28027
C REVISED PER TDRR 29622
D REVISED PER TDRR 33307
E REVISED PER TDRR 34561
Y=240
Y=450
Y=665
X=140
X=480
X=515
X=600
Y=245
Y=660
2 A" HOLES (.187 DIA. REF) TO EXTEND THRU POTTING SEE NOTE 12
SURFACE A
CONNECTOR AREA SEE NOTE 11
SEE NOTE 13
SEE NOTE 3
SEE NOTE 6 INSIDE WALL
SEE NOTE 4
SEE NOTE 11
.340 .330 2 PLACES
SEE NOTE 8
REF
2005038 WIRE WRAP DECK REF
AR AR 2006776-21 INSULATION SLEEVING
4 4 MS18555-641 PIN, STRAIGHT HEADLESS
AR AR NOC637E 003 WIRE, ELEC, INS
2 2 MS16555-628 PIN, STRAIGHT HEADLESS
4 4 2004139 PIN, HEADLESS DOWEL
1 1 2003091-011 TRAY B SUBASSY
MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER HOUSTON, TEXAS
TRAY B WIRED ASSEMBLY
80230 J 2003093
2003093

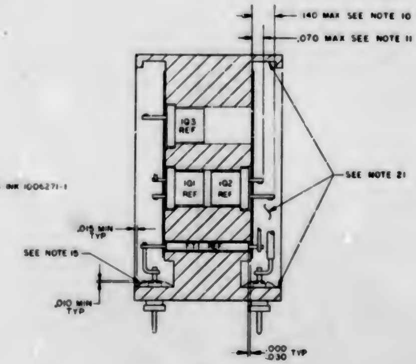
[redacted]

R5, R18, R29	
PART NO	VALUE (OHMS)
1006788-223	5.97
-224	6.04
-225	6.12
-226	6.19
-227	6.26
-228	6.34
-229	6.42
-230	6.49
-231	6.57
-232	6.65
-233	6.73
-234	[illegible]
-235	[illegible]
-236	6.98
-237	7.06
-238	7.15
-239	7.23
-240	7.32
-241	7.41
-242	7.50
-243	7.59
-244	7.68
-245	7.77
-246	7.87
-247	7.96
-248	8.06
-249	8.16
-250	8.25
-251	8.35
-252	8.45
-253	8.56
-254	8.66
-255	8.76
-209	5.05
-210	5.11
-211	5.17
-212	5.23
-213	5.30
-214	5.36
-215	5.42
-216	5.49
-217	5.56
-218	5.62
-219	5.69
-220	[illegible]
-221	[illegible]
1006788-222	5.90







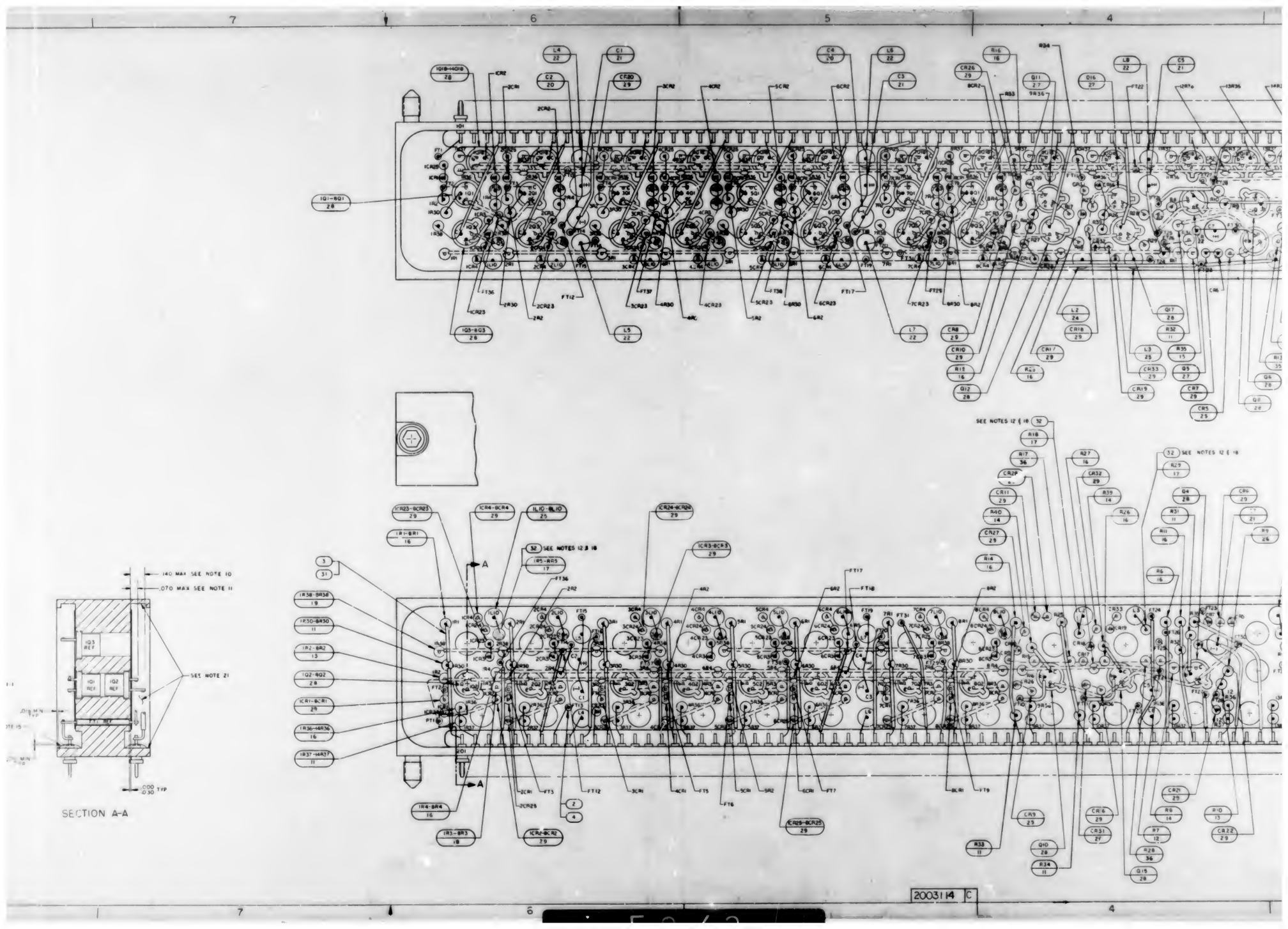


SECTION A-A

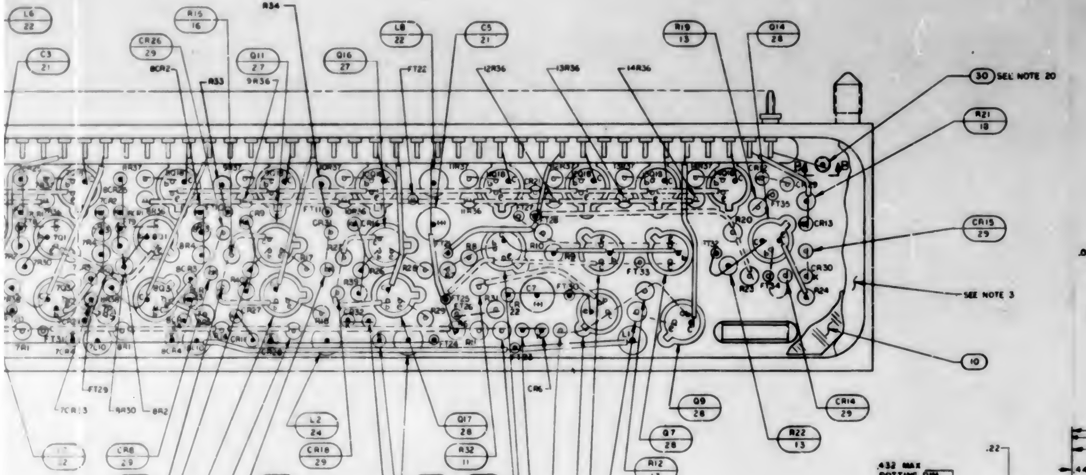
NOTES:

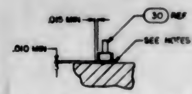
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. ENCAPSULATE PER ND1002002 REMOVE ALL FLASHING
4. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2. SERIALIZE PER ND1002023 USING MARKING INK 1006271-1
5. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING MARKING INK 1006271-1
6. AR DENOTES AS REQUIRED
7. FT DENOTES FEED THRU
8. K DENOTES CATHODE SIDE OF DIODE
9. (+) DENOTES POSITIVE SIDE OF CAPACITOR
10. BLACK DOT AND SINGLE SOLID LEAD INDICATE UPPER LEVEL WIRING
11. WHITE DOT AND SINGLE DOTTED LEAD INDICATE LOWER LEVEL WIRING
12. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST R5, R18, & R29 TO BE SELECTED FROM APPROPRIATE CHART
13. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002068
14. STAKE FIND NO 11 THRU FIND NO. 29 & FIND NO. 33, 35 AND 36 PER ND1002009 METHOD C OR D
15. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE VI
16. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL OF THE REQUIREMENTS OF PS 2003114
17. SEAL FIND NO 30 TO FIND NO 1 PER ND1002004 TYPE VI
18. ASSEMBLE FIND NO. 32 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
19. BOND FIND NO. 34 TO FIND NO 1 PER ND1002004 TYPE I
20. MOUNTING TORQUE FOR FIND NO. 30 TO BE 15 TO 20 INCH-OUNCES
21. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II
22. PAINT SURFACE INDICATED RED USING MARKING INK 1006271-9

2003114 C

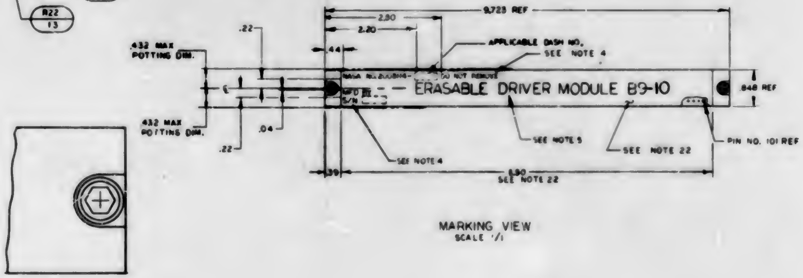

SECTION A-A
2003114 C

SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 29079 DR CHK APPD		JKE
B	REVISED PER TDRR 29621 DR CHK APPD		DAY
C	REVISED PER TDRR 30887 DR CHK APPD		RSR

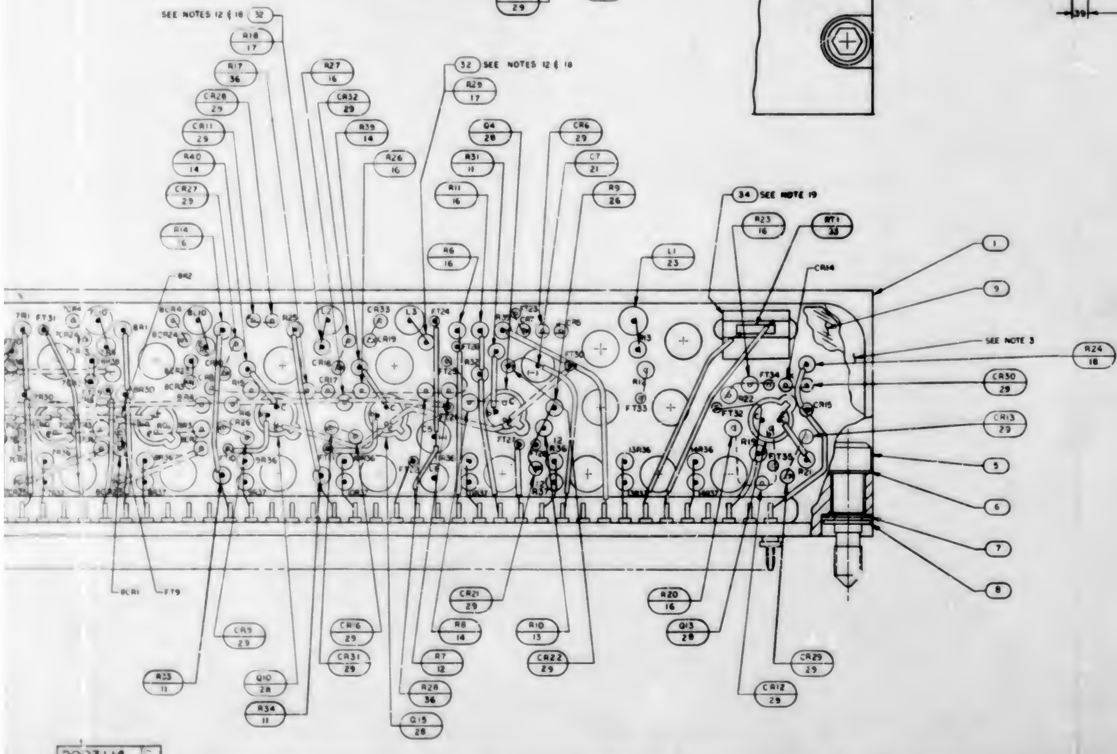




PARTIAL SECTION B-B



MARKING VIEW
SCALE 1/1



QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
☒	2005104	SCHEMATIC	REF
2	1006788-9	RESISTOR	36
1	1006788-8	RESISTOR	35
1	1004738-001	INSULATOR	34
1	1006712-3	RESISTOR, TEMP SENSITIVE	33
10	2004074	INSULATOR, WASHER	32
AR	1006776-21	INSULATION SLEEVING	31
1	2004039	TERMINAL, THREADED	30
82	2004103-001	DIODE	29
47	2004004-001	TRANSISTOR, POTTED	28
3	2004004-002	TRANSISTOR, POTTED	27
1	1006750-29	RESISTOR	26
9	1010406-10	COIL, RF CHOKE	25
1	1010406-8	COIL, RF CHOKE	24
1	1010406-11	COIL, RF, CHOKE	23
5	1010406-7	COIL, RF, CHOKE	22
4	1006755-79	CAPACITOR	21
2	1006755-32	CAPACITOR	20
8	1006750-12	RESISTOR	19
10	1006789-11	RESISTOR	18
10	SEE NOTE 12	RESISTOR	17
40	1006750-49	RESISTOR	16
1	1006750-43	RESISTOR	15
3	1006750-39	RESISTOR	14
12	1006750-32	RESISTOR	13
1	1006750-24	RESISTOR	12
26	1006750-15	RESISTOR	11
1	2004159	INSULATOR (A)	10
1	2004160	INSULATOR (B)	9
2	MS16633-4015	RING, RETAINING, EXTERNAL "E"	8
2	2004384-003	WASHER, FLAT	7
2	2004384-001	WASHER, FLAT	6
2	1004579-1	SCREW, JACKING	5
AR	1006776-22	INSULATION SLEEVING	4
AR	1006757-1	WIRE, ELECTRICAL	3
AR	1006757-8	WIRE, ELECTRICAL	2
1	2003115-011	HEADER, HOUSING, ASSY	1

-011 LIST OF MATERIALS

NEXT ASSY	2003200
USED ON	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

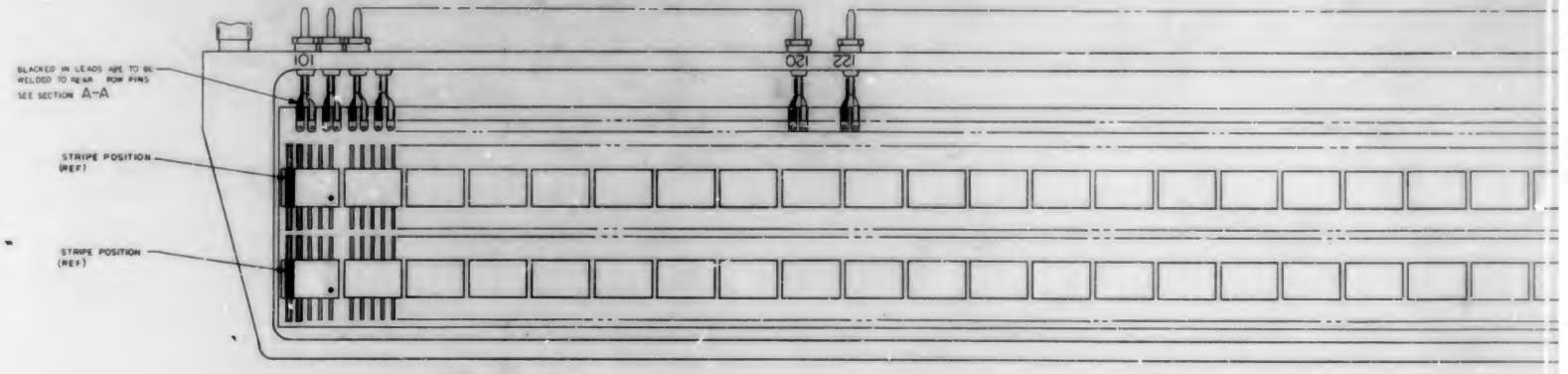
MIT INSTRUMENTATION LAB

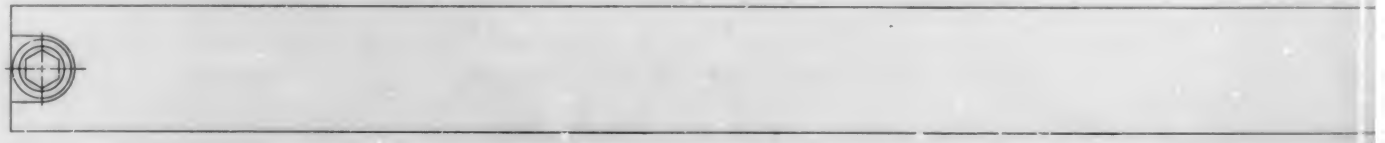
NASA APPROVAL A C METZGER

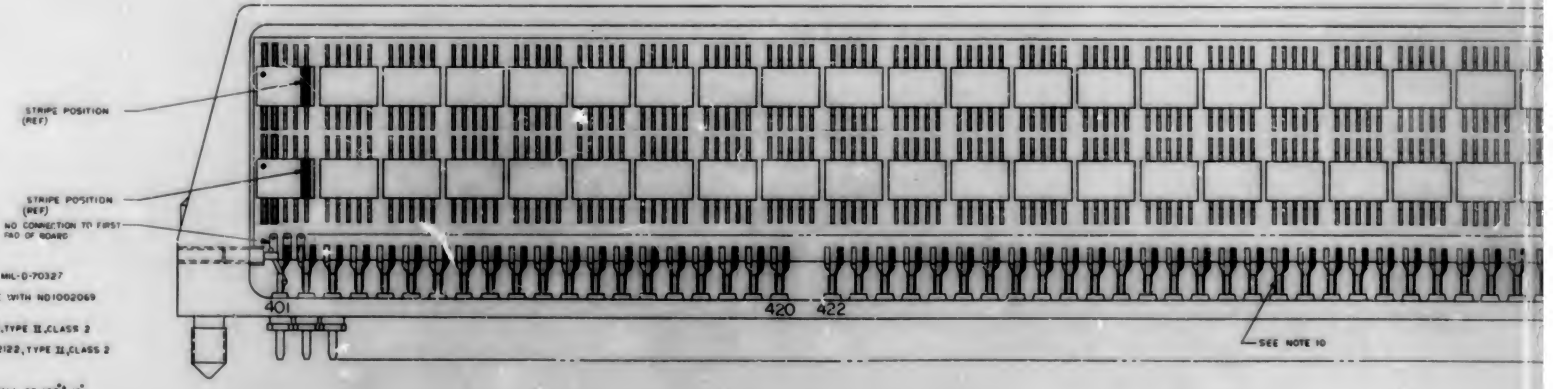
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

ERASABLE DRIVER MODULE B9-10 ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003114
SCALE 4/1 | SHEET 1 OF 1



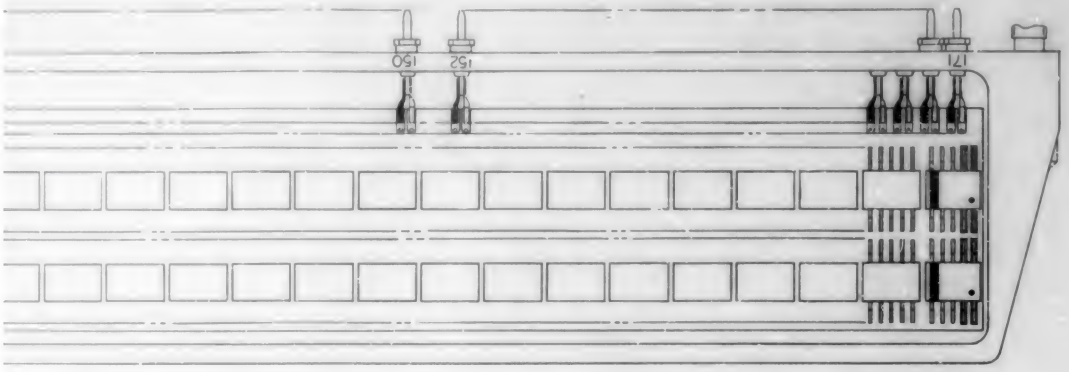


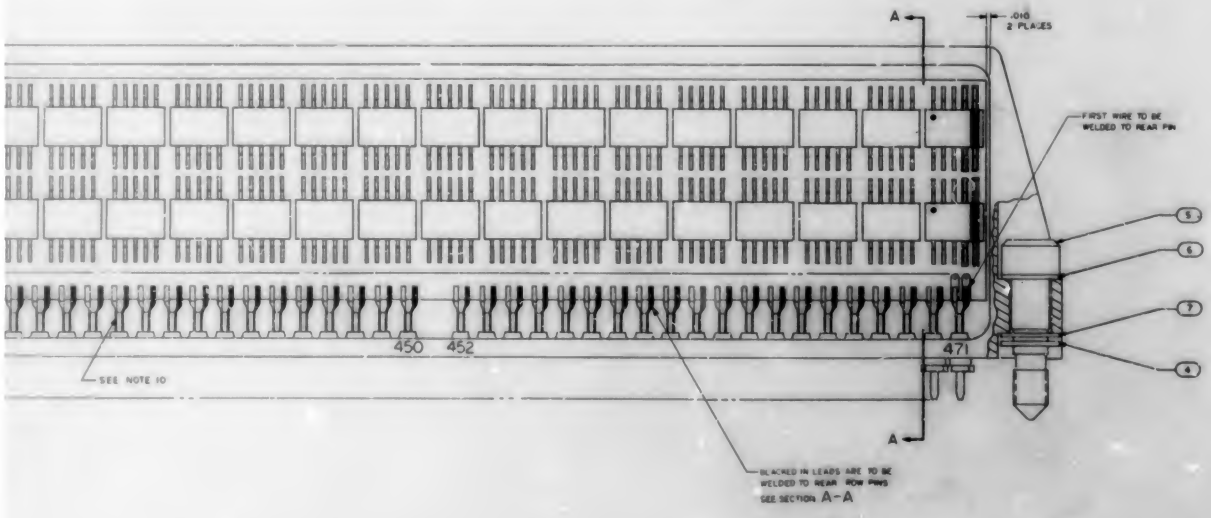


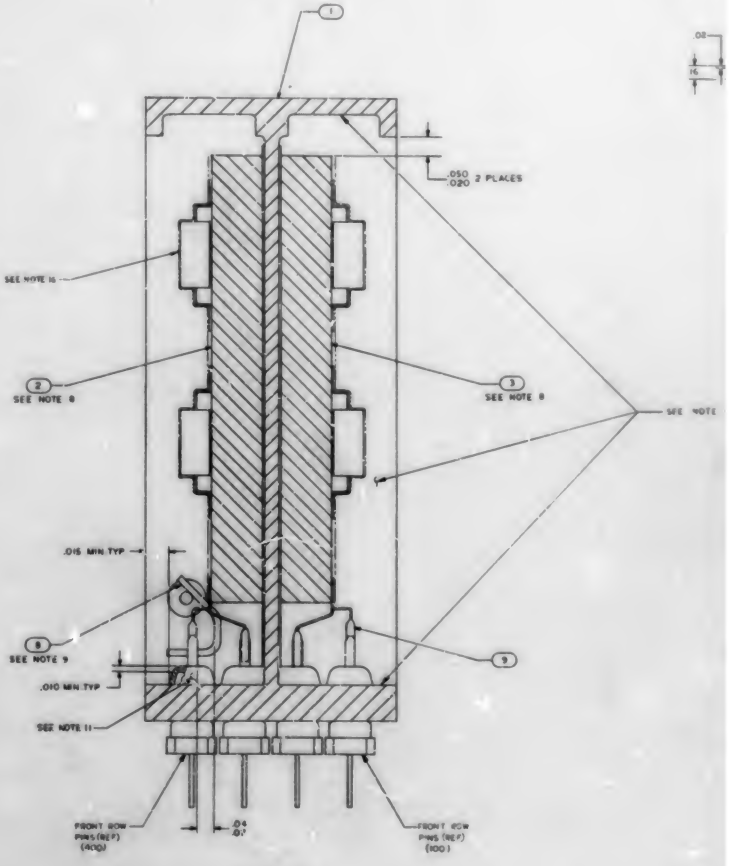
NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD FIND NO. 9 TO FIND NO 2 AND FIND NO. 3 PER ND1002256
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. AR DENOTES AS REQUIRED
5. ENCAPSULATE PER ND1002002. REMOVE FLASHING
6. MARK 10/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INV 100627-1
7. MARK 24/24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INV 100627-1
8. BOND FIND 2 AND 3 TO FIND NO. 1 PER ND1002004 TYPE I
9. WELD FIND NO 8 TO FIND NO. 1 PER ND1002005
10. WELD PER ND1002005 EXCEPT THAT THE ANGLE OF THE JOINT SHALL BE 180° ±10°. 180° ±10° SAMPLES SHALL BE USED FOR T-PEEL PULL TESTS
11. SEAL INSULATOR 3 AND TERMINALS TO HEADER PER ND1002004 TYPE XI
12. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF F/S 2002120
13. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES, PER ND1002107, TYPE II
14. * PARTS 2003083-451 AND 2003083-551 ARE INTERCHANGEABLE WHEN USED IN 2003120-1XX
15. NO CONNECTION BETWEEN PIN 252 AND ASSOCIATED PAD(-061 AND -251 CONFIGURATIONS ONLY)
16. SPRAY COAT INDICATED SURFACES WITH .005 MINIMUM THICKNESS UNPIGMENTED COATING PER ND1002136

F 1



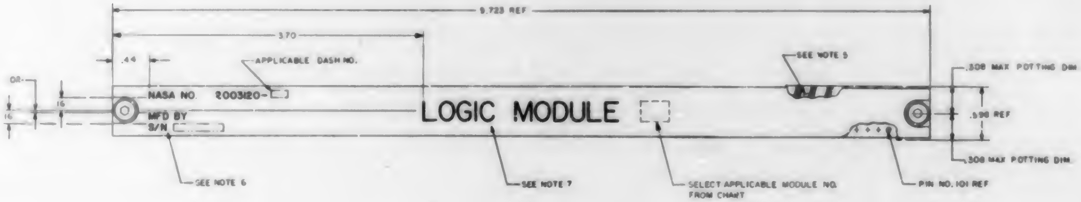




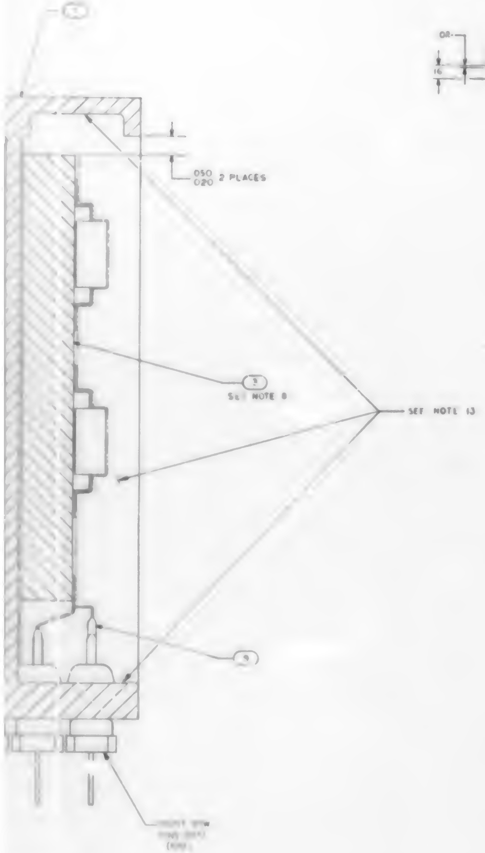
SECTION A-A
SCALE 10/1

F 2

A	REV FD PER TDRR 23?6	
B	... PER TDRR 23426	
C	REVISED PER TDRR 24193	
D	REVISED PER TDRR 24664	
E	REVISED PER TDRR 25?33	



MARKING VIEW
SCALE 2/1



REF MOD NO	PART NO.	FIND NO.2	FIND NO.3	
A1	2003120-011	2003083-021	200308[illegible]1	
A2	-021	-041	-031	
A3	-031	-061	-051	
A4	-041	-081	-071	
A5	-051	-111	-091	
A6	-061	-131	-121	* SEE NOTE 15
A7	-071	-151	-141	
A8-11	-081	-171	-161	
A12	-091	-261	-251	
A13	-111		-271	
A14	-121	-311	-291	
A15	-131	-331	-321	
A16	-141	-351	-341	
A17	-151	-371	-361	
A18	-161	-391	-381	
A19	-171	-421	-411	
A20	-181	-441	-431	
A21	-191	-461	-451	* SEE NOTE 14
A22	-211	-481	-471	
A23	-221	-511	-491	
A24	-231	-531	-521	
A13	-241	-261	-541	
A21	-191	-461	-551	* SEE NOTE 14
A6	2003120-251	2003083-561	2003083-121	* SEE NOTE 15

QTY. APPLY TO EACH PART NO. SEE CHART

QTY	PART NO.	DESCRIPTION	FIND NO.
AR	1006757-20	WIRE, ELECTRICAL	9
AR	1005757-?	WIRE, ELECTRICAL	8
2	1004546-3	WASHER, FLAT	7
2	1004545-1	WASHER, FLAT	6
2	1004575-1	SCREW, JACKING	5
2	MS16633-4015	RING, RETAINING	4
1	SEE CHART	CIRCUIT BOARD ASSEMBLY	3
1	SEE CHART	CIRCUIT BOARD ASSEMBLY	2
1	20?3200-021	HEADER HOUSING ASSEMBLY	1

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

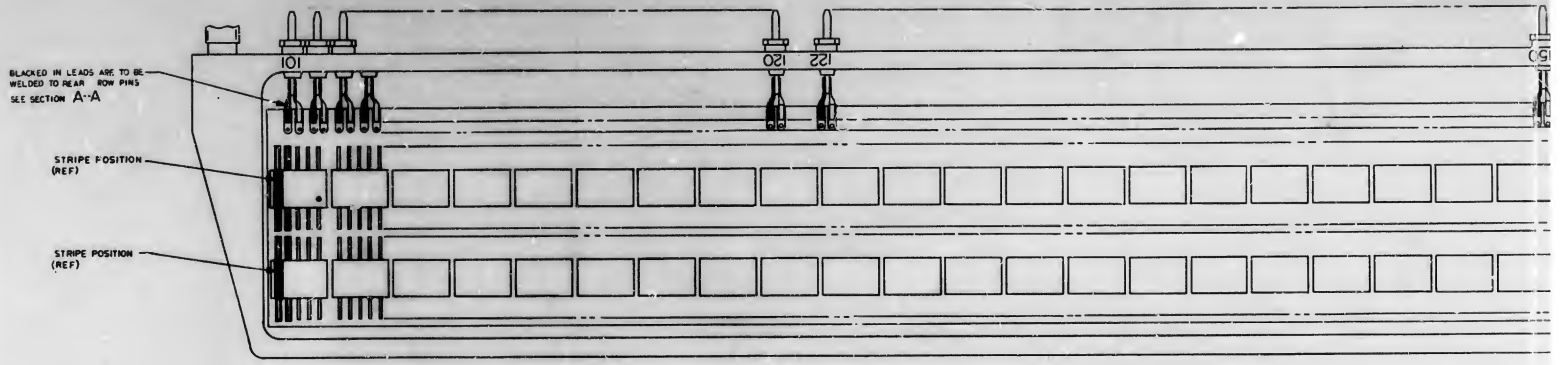
LOGIC MODULE ASSY (TABULATED)

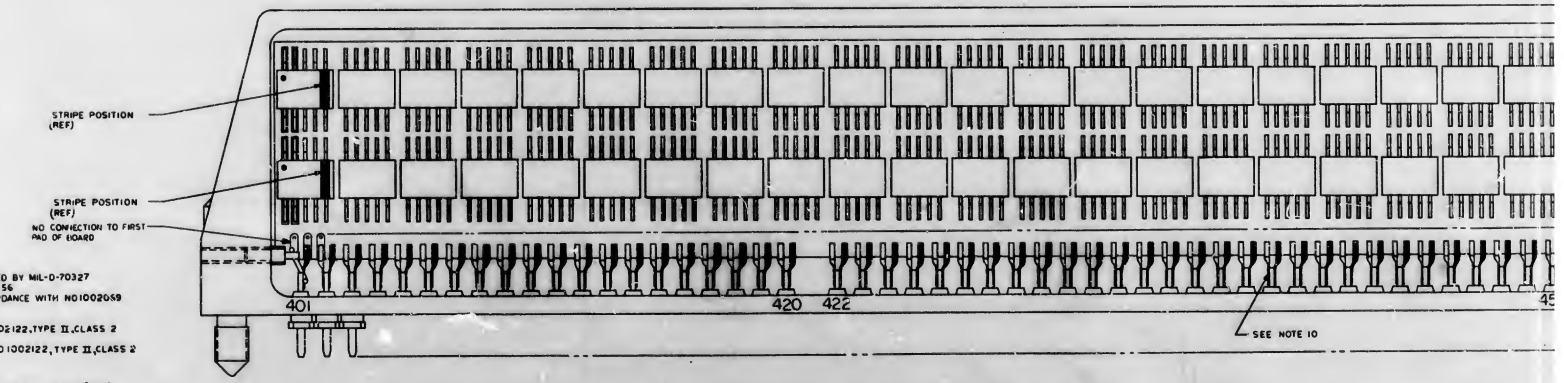
2003100

80230 | J | 2003120

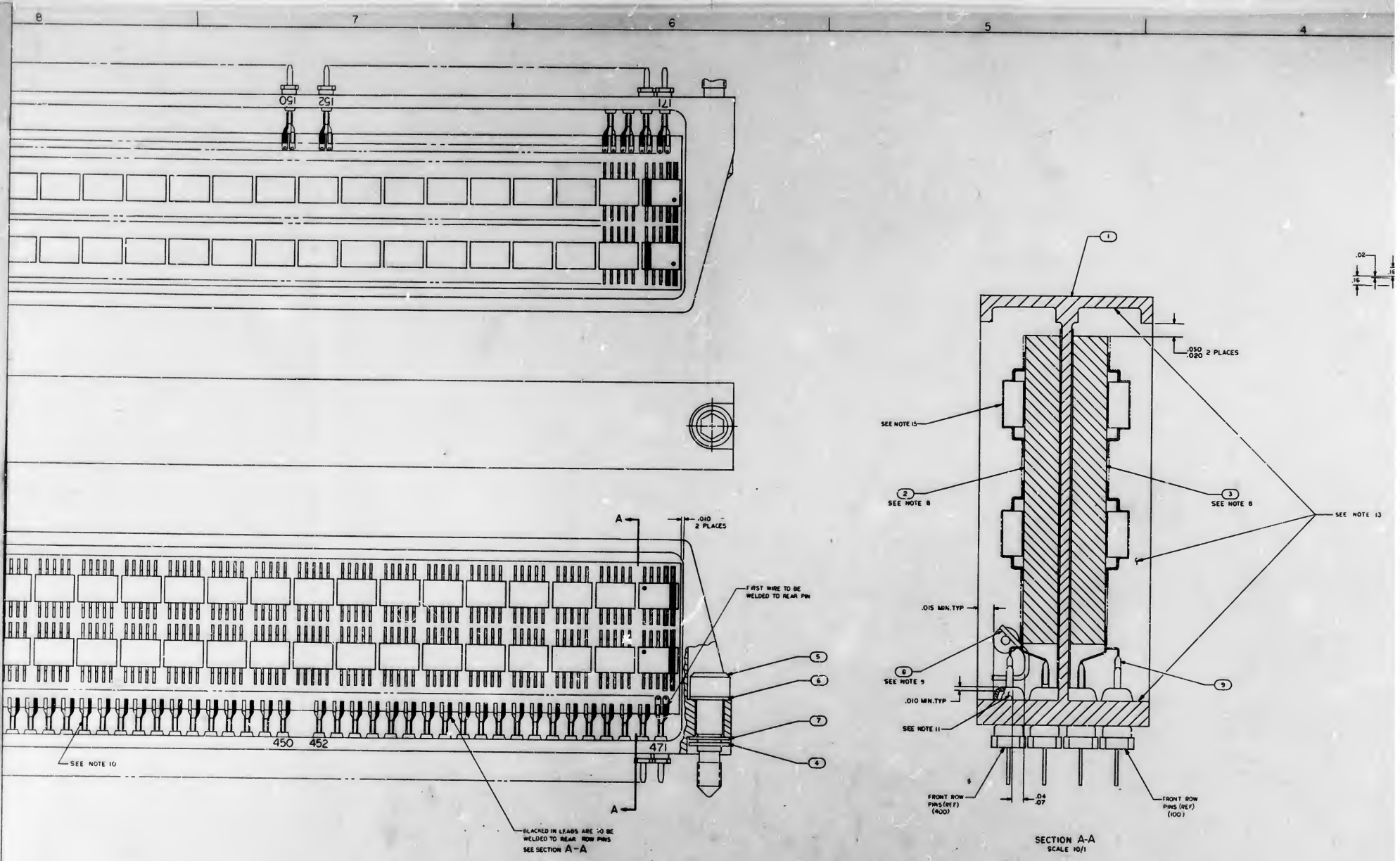
2003120 E

F 3





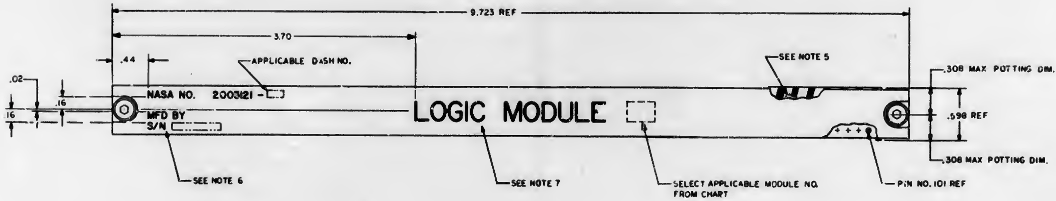
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD FIND NO. 9 TO FIND NO 2 AND FIND NO.3 PER ND1002256
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002059
4. AR DENOTES AS REQUIRED
5. ENCAPSULATE PER ND1002002. REMOVE FLASHING
6. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INV 1006271-1
7. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INV 1006271-1
8. BOND FIND 2 AND 3 TO FIND NO.1 PER ND1002004 TYPE I .
9. WELD FIND NO 8 TO FIND NO. 1 PER ND1002005
10. WELD PER ND1002005 EXCEPT THAT THE ANGLE OF THE JOINT SHALL BE $180^{\circ}\pm45^{\circ}$. $180^{\circ}\pm45^{\circ}$ SAMPLES SHALL BE USED FOR TENSILE PULL TESTS
11. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE III
12. COMPLETED ASSEMBLIES SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S. 200312
13. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES, PER ND1002187, TYPE II
14. NO CONNECTION BETWEEN PIN 232 AND ASSOCIATED PAD(-061 CONFIGURATION ONLY)
15. SPRAY COAT INDICATED SURFACES WITH .005 MINIMUM THICKNESS UNPIGMENTED COATING PER ND1002035



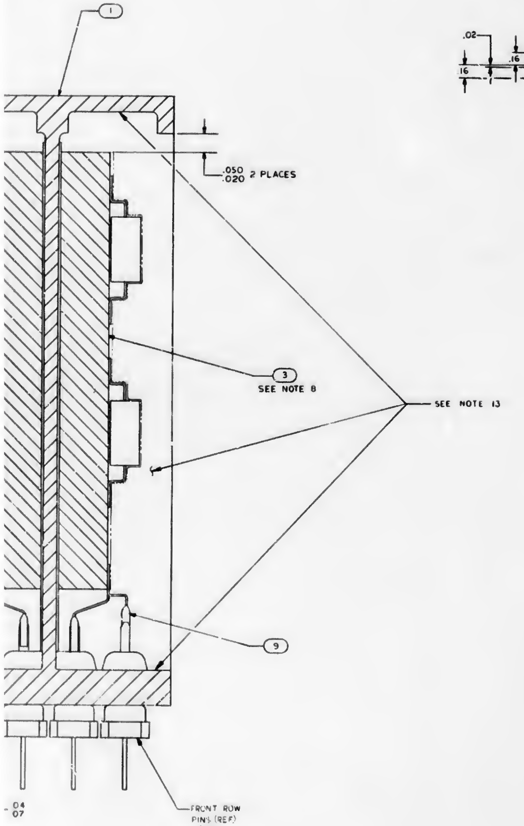
SECTION A-A
SCALE 10/1

2003121 A

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVAL
A		REVISED PER TDRR 27309				



MARKING VIEW
SCALE 2/1



SECTION A-A
SCALE 10/1

REF MOD NO.	PART NO.	FIND NO.2	FIND NO.3
A1	2003121-011	2003086-021	2003086-011
A2	-021	-041	-031
A3	-031	-061	-051
A4	-041	-081	-071
A5	-051	-111	-091
A6	-061	-131	-121
A7	-071	-151	-141
A8 —11	-081	-171	-161
A12	-091	-261	-251
A13	-111		-271
A14	-121	-311	-291
A15	-131	-331	-321
A16	-141	-351	-341
A17	-151	-371	-361
A18	-161	-391	-381
A19	-171	-421	-411
A20	-181	-441	-431
A21	-191	-461	-451
A22	-211	-481	-471
A23	-221	-511	-491
A24	2003121 231	2003086 531	2003086-521

\# SEE NOTE 14

QTY. APPLY TO EACH PART NO. SEE CHART

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
AR	1006757-20	WIRE, ELECTRICAL	9
AR	1006757-8	WIRE, ELECTRICAL	8
2	2004984-003	WASHER, FLAT	7
2	2004984-001	WASHER, FLAT	6
2	1004579-1	SCREW, JACKING	5
2	MS16633-4015	RING, RETAINING	4
1	SEE CHART	CIRCUIT BOARD ASSEMBLY	3
1	SEE CHART	CIRCUIT BOARD ASSEMBLY	2
1	2003000-021	HEADER HOUSING ASSEMBLY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± — DECIMALS XX±.02 ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL

2003200 NEXT ASSY — USED ON — APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS

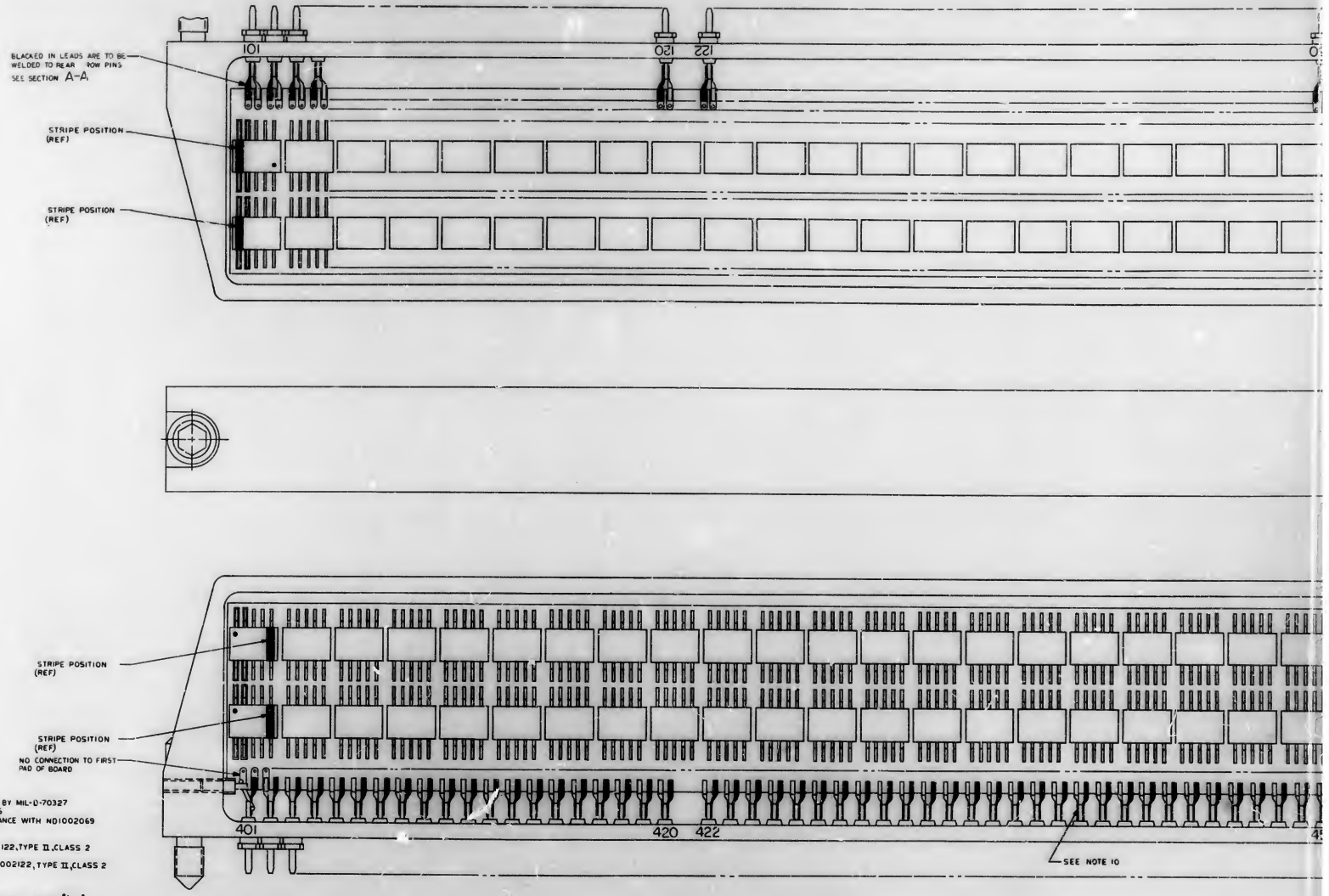
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

LOGIC MODULE ASSY (TABULATED)

CODE IDENT NO. 80230 SIZE J DRAWING NO. 2003121

SCALE 5/1 SHEET 1 OF 1

2003121 A

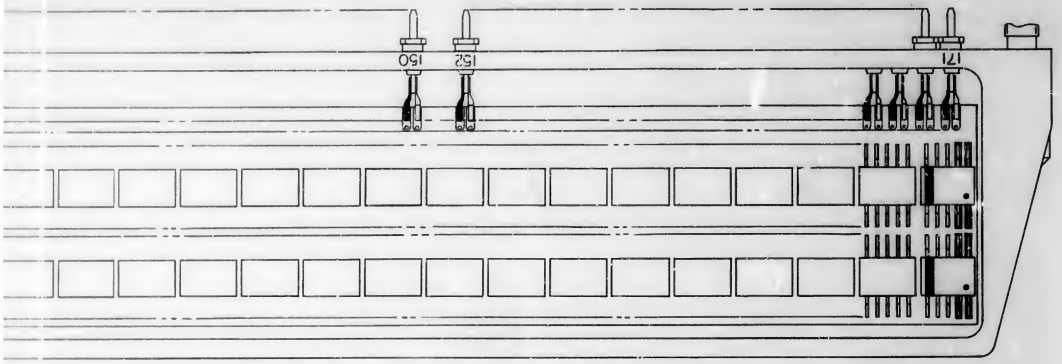


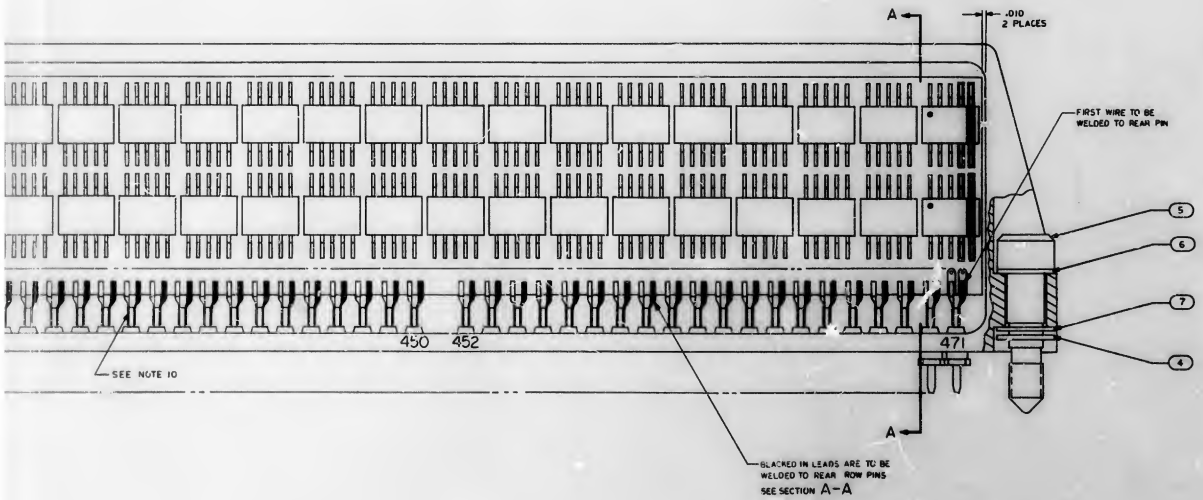
NOTES:

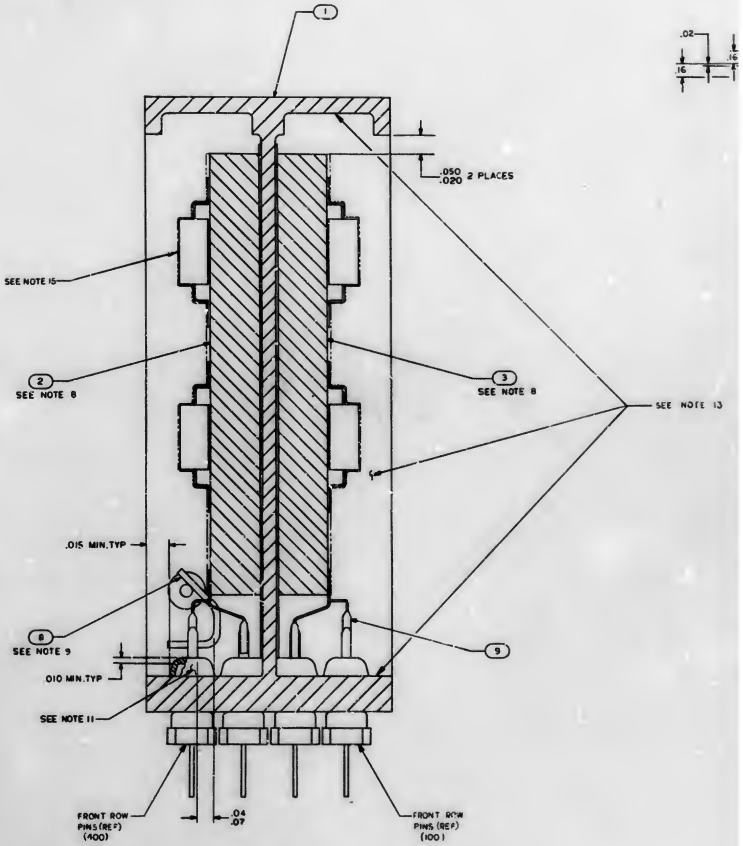
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD FIND NO. 9 TO FIND NO. 2 AND FIND NO.3 PER ND1002256
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. AR DENOTES AS REQUIRED
5. ENCAPSULATE PER ND1002002. REMOVE FLASHING
6. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
7. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
8. BOND FIND 2 AND 3 TO FIND NO.1 PER ND1002004 TYPE I .
9. WELD FIND NO. 9 TO FIND NO. 1 PER ND1002005
10. WELD PER ND1002003 EXCEPT THAT THE ANGLE OF THE JOINT SHALL BE $180^{\circ} \pm 45^{\circ}$. $180^{\circ} \pm 45^{\circ}$ SAMPLES SHALL BE USED FOR TENSILE PULL TESTS
11. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004 TYPE III
12. COMPLETED ASSEMBLIES SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S. 2003121
13. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES, PER ND1002187, TYPE II
14. NO CONNECTION BETWEEN PIN 232 AND ASSOCIATED PAD (-061 CONFIGURATION ONLY)
15. SPRAY COAT INDICATED SURFACES WITH .005 MINIMUM THICKNESS UNPIGMENTED COATING PER ND1002035

F1

2003121



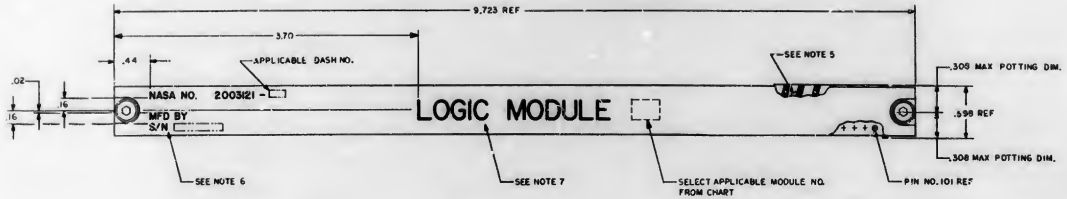




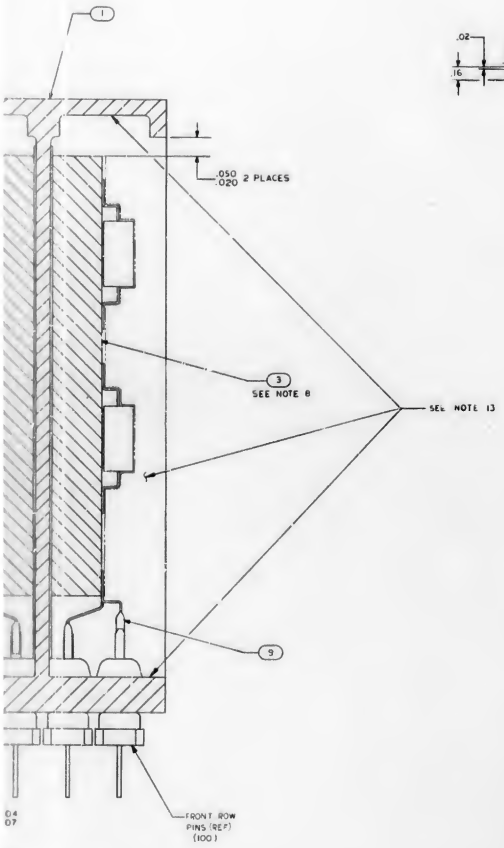
SECTION A-A
SCALE 10/1

F 2

200312



MARKING VIEW
SCALE 2/1



SECTION A-A
SCALE 10/1

REF. MOD NO.	PART NO.	FIND NO.2	FIND NO.3	
A1	2003121-011	2003086-021	2003086-011	
A2	-021	-081	-031	
A3	-031	-061	-051	
A4	-041	-081	-071	
A5	-051	-111	-091	
A6	-061	-131	-121	#SEE NOTE 14
A7	-071	-151	-141	
A8 -11	-081	-171	-161	
A12	-091	-261	-251	
A13	-111		-271	
A14	-121	-311	-291	
A15	-131	-331	-321	
A16	-141	-351	-341	
A17	-151	-371	-361	
A18	-161	-391	-381	
A19	-171	-421	-411	
A20	-181	-441	-431	
A21	-191	-461	-451	
A22	-211	-481	-471	
A23	-221	-511	-491	
A24	2003121 29	2003086 59	2003086-521	

QTY. APPLY			
TO EACH	AR	11006757-20	WIRE, ELECTRICAL
PART NO.	AR	11006757-8	WIRE, ELECTRICAL
SEE CHART	2	10041445-3	WASHER, FLAT
	2	11006645-1	WASHER, FLAT
	2	10048678-1	SCREW, JACKING
	2	MS16633-4015	RING, RETAINING
	1	SEE CHART	CIRCUIT BOARD ASSEMBLY
	1	SEE CHART	CIRCUIT BOARD ASSEMBLY
	1	2003100-021	HEADER HOUSING ASSEMBLY

	MANNED SPACECRAFT CENTER	
	LOGIC MODULE ASSY (TABULATED)	
2003100	80230	J 2003121

F3

2003121

APOLLO G&N Specification
PS 2003121 Rev. C
Original Issue Date: 4-26-66
Release Authority: TDRR 28256
Class **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

LOGIC MODULE ASSEMBLIES

(MODULES A1-A24)

DRAWING NO. 2003121

Record of Revisions

	Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
M	5/24/66	A	29052	1,4,6,7, and 8		
M	7/1/66	B	29909	1,6, & 8		
M	9/1/66	C	30873	1, 5		

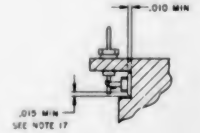
This specification consists of pages 1 to 8 inclusive.

APPROVALS	A. C. METZGER NASA/MSC	MIT/IL	RAY

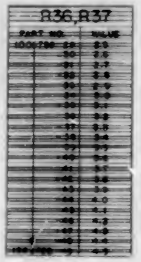
R29, R50, R51	
PART NO.	VALUE
100678B-201	4.91
-206	4.87
-207	4.93
-208	4.93
-209	5.05
-210	5.11
-211	5.17
-212	5.23
-213	5.30
-214	5.36
-215	5.42
-216	5.49
-217	5.56
-218	5.62
-219	5.69
-220	5.76
-221	5.83
-222	5.90
-223	5.97
-224	6.04
-225	6.12
-226	6.19
-227	6.26
-228	6.34
-229	6.42
-230	6.49
-231	6.57
-232	6.65
-233	6.73
-234	6.81
-235	6.90
-236	6.98
-237	7.06
-238	7.15
-239	7.23
-240	7.32
-241	7.41
100678B-242	7.50

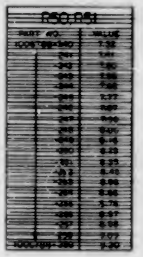
R36, R37	
PART NO.	VALUE
100678B-253	976
-256	9.09
-257	9.25
-258	9.41
-259	9.57
-260	9.31
-261	9.42
-262	9.53
-264	9.76
-265	9.88
-266	10.0
-267	10.1
-268	10.2
-269	10.4
-270	10.5
-271	10.6
-272	10.7
-273	10.9
-274	11.0
-275	11.1
-276	11.3
-277	11.4
-278	11.5
100678B-279	11.7

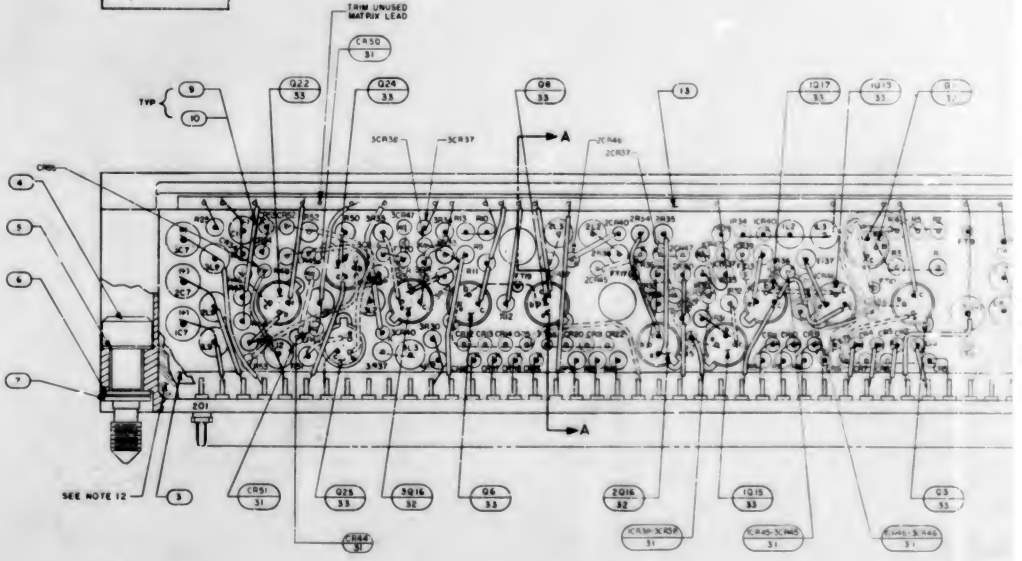
L2, L3	
PART NO.	VALUE
1010436-11	3.9 UH
1010436-20	2.7 UH
1010436-21	3.3 UH



SECTION B-B

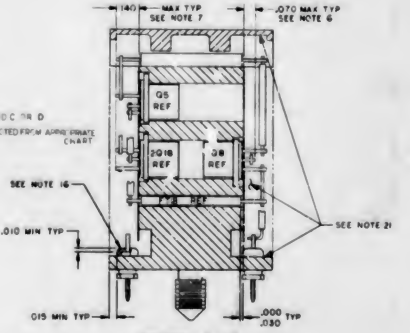




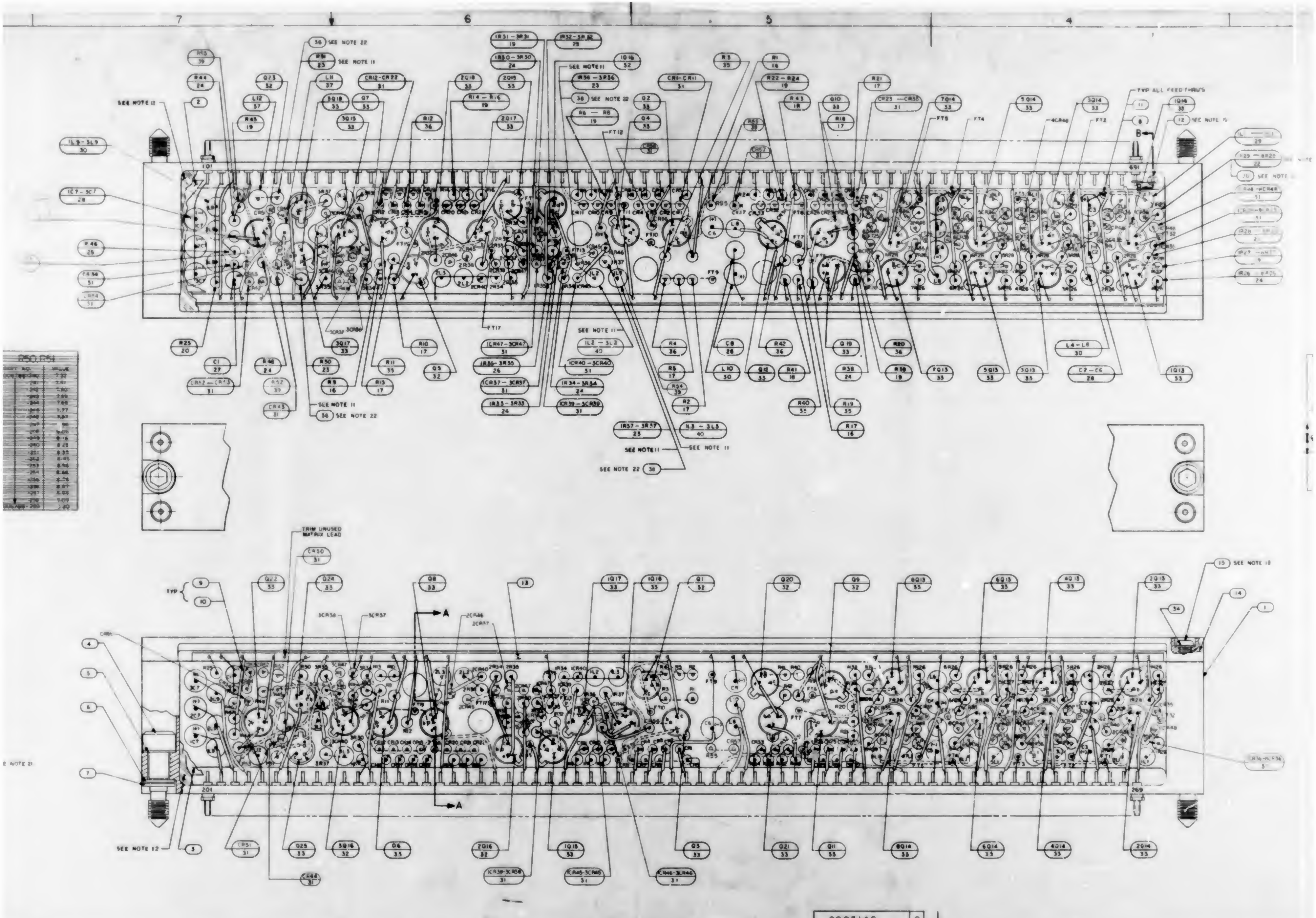


NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. F/T DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
7. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
8. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND 1002069
9. WELD PER ND 1002005
10. STAKE FIND NO. 16 THRU FIND NO. 33, 35, 36, 37, 39 AND 40 TO FIND NO. PER ND [illegible] 9, METHOD C OR D
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST: R29, R32, R50, R51 AND L2 & L3 TO BE SELECTED FROM APPROPRIATE CHART
12. ENCAPSULATE PER ND 1002002. REMOVE FLASHING
13. MARK .10/.08 HIGH WHITE CHARACTERS PER ND 1002019 AND ND 1002122 TYPE II, CLASS 2 AND SERIALIZE PER ND 1002023 USING INK 1006271-1.
14. MARK .126/.24 HIGH WHITE CHARACTERS PER ND 1002019 AND ND 1002122 TYPE II, CLASS 2 USING INK 1006271-1
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS 2003140
16. SEAL INSULATORS AND TERMINALS TO HEADER PER MS1002004, TYPE XII
17. SEAL FIND NO. 12 TO HEADER PER ND1002004, TYPE XI
18. MOUNTING TORQUE FOR FIND NO. 15 TO BE 2.0 - 2.9 INCH POUNDS
19. MOUNTING TORQUE FOR FIND NO. 12 TO BE 15-21 INCH OUNCES
20. BOND FIND NO. 13 TO FIND NO. 1 PER ND1002004, TYPE I
21. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES, PER ND1002187, TYPE II
22. ASSEMBLE FIND NO. 38 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED

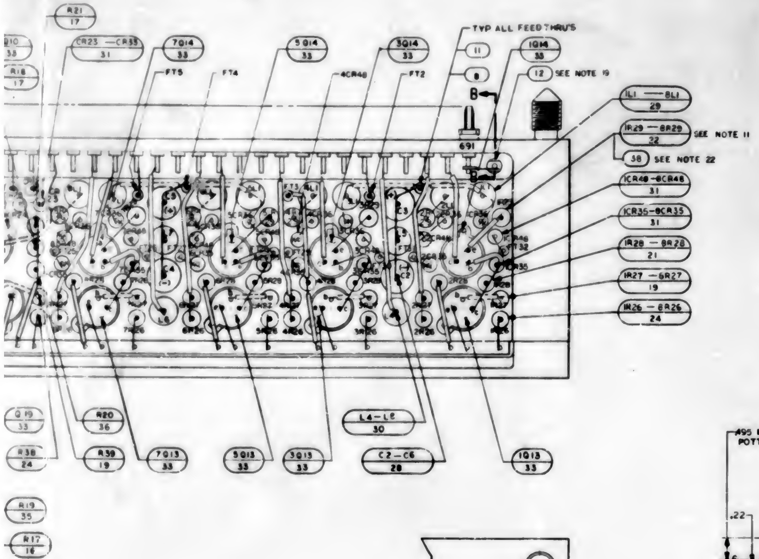


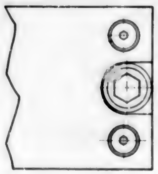
SECTION A-A

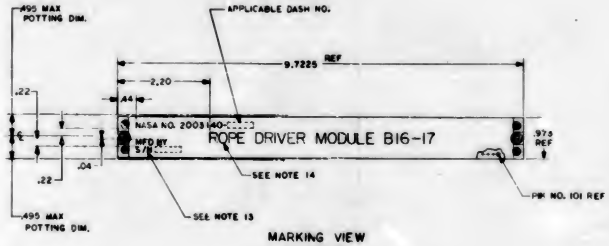

7
6
5
4
SEE NOTE 22
SEE NOTE 11
SEE NOTE 12
TYP ALL FEEDTHRU'S
SEE NOTE 15
1L9 - 3L9
30
1C7 - 3C7
28
R46
25
CR34
31
R25
20
C1
27
R50
23
R9
16
3Q17
33
R10
17
Q5
32
1CR47 - 3CR47
31
1R36 - 3R36
26
1CR37 - 3CR37
31
1R33 - 3R33
24
1L2 - 3L2
40
1CR40 - 3CR40
31
1R34 - 3R34
24
1CR39 - 3CR39
31
1R37 - 3R37
23
1L3 - 3L3
40
R4
36
R5
17
R2
17
C8
28
L10
30
Q12
33
R42
36
R41
18
R40
35
Q19
33
R38
24
R19
35
R17
16
R20
36
R39
19
7Q13
33
5Q13
33
3Q13
33
L4 - L8
30
C2 - C6
28
1Q13
33
1R31 - 3R31
19
1R32 - 3R32
25
1R30 - 3R30
24
1Q16
32
1R36 - 3R36
23
R6 - R8
19
Q2
33
Q4
33
R3
35
R1
16
CR1 - CR11
31
R22 - R24
19
R43
18
Q10
33
R18
17
R21
17
CR23 - CR33
31
7Q14
33
5Q14
33
3Q14
33
1Q14
33
CR12 - CR22
31
2Q18
33
2Q15
33
2Q17
33
R14 - R16
19
R12
36
Q7
33
3Q18
33
3Q15
33
L11
37
L12
37
Q23
32
R44
24
R45
19
R51
23
R50, R51
PART NO.
VALUE
TRIM UNUSED MATRIX LEAD
CR50
31
TYP
Q22
33
Q24
33
Q8
33
1Q17
33
1Q18
33
Q1
32
Q20
32
Q9
32
8Q13
33
6Q13
33
4Q13
33
2Q13
33
CR51
31
Q25
33
3Q16
32
Q6
33
2Q16
32
1Q15
33
Q3
33
Q21
33
Q11
33
8Q14
33
6Q14
33
4Q14
33
2Q14
33
CR44
31
1CR38 - 3CR38
31
1CR45 - 3CR45
31
1CR46 - 3CR46
31
SEE NOTE 18
SEE NOTE 21
101
201
269
A
B

2003140 G

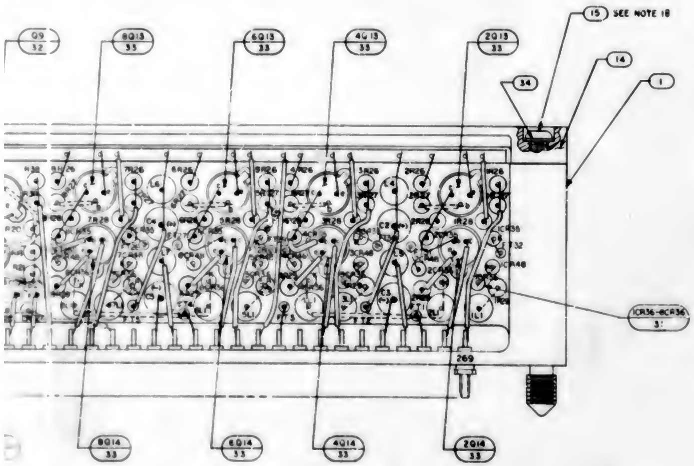
SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVAL
REVISIONS 25980						
A		REVISED PER TDRR 27309				
B		REVISED PER TDRR 27079				
C		REVISED PER TDRR 28162				
D		REVISED PER TDRR 29079				
E		REVISED PER TDRR 30864				
F		REVISED PER TDRR 31827				
G		REVISED PER TDRR 32346				







MARKING VIEW
SCALE 1/1



QTY REQD	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
-021	-011		LIST OF MATERIALS	
X	—	2005942	SCHEMATIC	REF
—	X	2005100	SCHEMATIC	REF
6	6	SEE NOTE 11	COIL, RF, CHOKE	40
4	4	1006750-16	RESISTOR	39
16	16	2004074	INSULATOR, WASHER	38
2	2	1010406-11	COIL, RF, CHOKE	37
4	4	1006750-29	RESISTOR	36
4	4	1006750-24	RESISTOR	35
4	4	NAS620A-2	WASHER, FLAT	34
39	39	2004004-001	TRANSISTOR, POTTED	33
8	8	2004004-002	TRANSISTOR, POTTED	32
89	85	2004103-001	DIODE	31
9	9	1010406-7	COIL, RF, CHOKE	30
8	8	1010406-10	COIL, RF, CHOKE	29
9	9	1006755-79	CAPACITOR	28
1	1	1006755-69	CAPACITOR	27
3	3	1006718-9	RESISTOR	26
4	4	1006750-32	RESISTOR	25
20	21	1006750-49	RESISTOR	24
8	8	SEE NOTE 11	RESISTOR	23
8	8	SEE NOTE 11	RESISTOR	22
8	8	1006750-22	RESISTOR	21
1	1	1006750-43	RESISTOR	20
23	22	1006750-15	RESISTOR	19
2	2	1006750-39	RESISTOR	18
6	6	1006750-35	RESISTOR	17
3	3	1006750-36	RESISTOR	16
4	4	1006783-10	SCREW, BUTTON HEAD, HEX SOCKET	15
1	1	2004032	COVER	14
1	1	2003142-011	MATRIX ASSEMBLY	13
1	1	2004039	TERMINAL, THREADED	12
AR	AR	1006776-22	INSULATION, SLEEVING	11
AR	AR	1006776-21	INSULATION, SLEEVING	10
AR	AR	1006757-1	WIRE, ELECTRICAL	9
AR	AR	1006757-8	WIRE, ELECTRICAL	8
2	2	MS16633-4015	RING, RETAINING, EXTERNAL, "E"	7
2	2	2004984-003	WASHER, FLAT	6
2	2	2004984-001	WASHER, FLAT	5
2	2	1004579-1	SCREW, JACKING	4
1	1	2003992	INSULATOR (B) ASSY	3
1	1	2004720	INSULATOR (A)	2
1	1	2003084-011	HEADER HOUSING ASSEMBLY	1

2003140 G

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± — DECIMALS XX±.02 ANGLES ± —
DO NOT SCALE THIS DRAWING

2003200 — NEXT ASSY / USED ON — APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DRAWN / CHECKED / APPROVED / APPROVED
APPROVED MIT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

ROPE DRIVER MODULE B16-17 ASSEMBLY

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 2003140
SCALE 1/1 | SHEET 1 OF 1

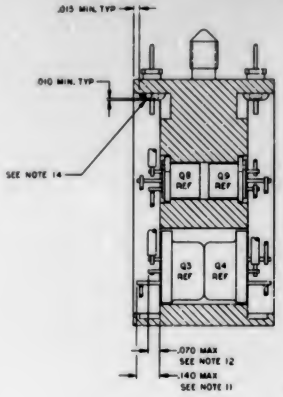
2003140 | G

R11,R93	
PART NO.	VALUE
1006758-6	10
1006758-9	39
1006750-1	51
-4	68
-7	91
-9	110
-11	130
-12	150
-13	160
-14	180
-15	200
-16	220
1006750-17	240

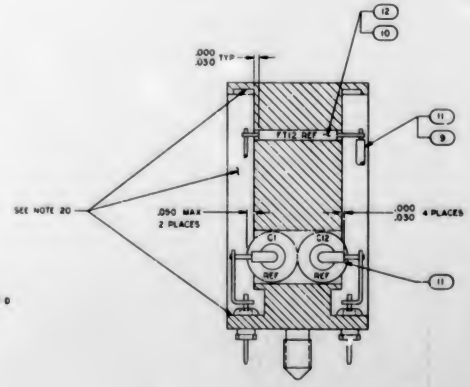
R12	
PART NO.	VALUE
1006750-36	1500
-37	1600
-38	1800
-39	2000
-40	2200
1006750-41	2400

R94	
PART NO.	VALUE
1006750-27	620
-30	820
-32	1000
-34	1200
-35	1300
-36	1500
-37	1600
1006750-38	1800

R3	
PART NO.	VALUE
1006750-128	3450
-45	3600
-125	3750
-46	3900
-130	4100
-47	4300
-131	4500
1006750-48	4700

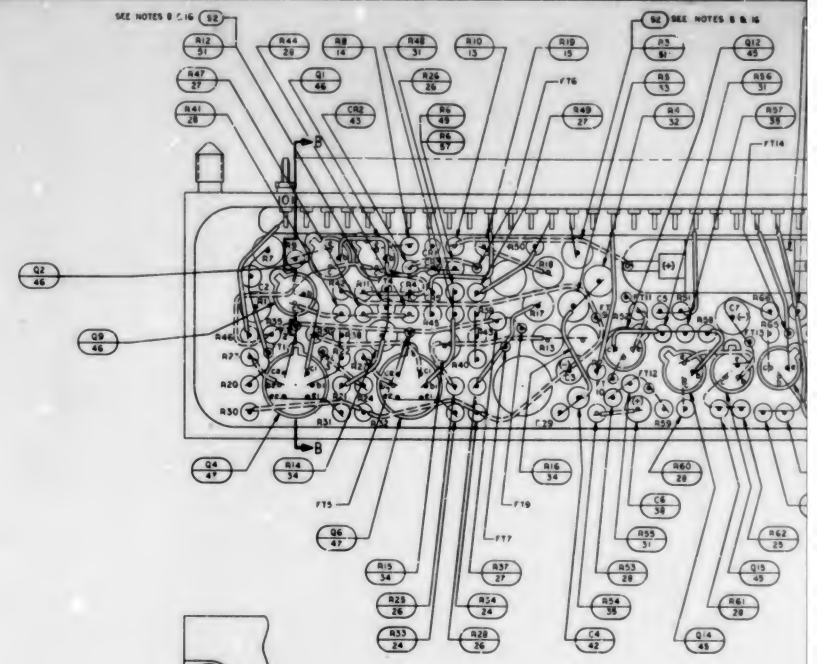


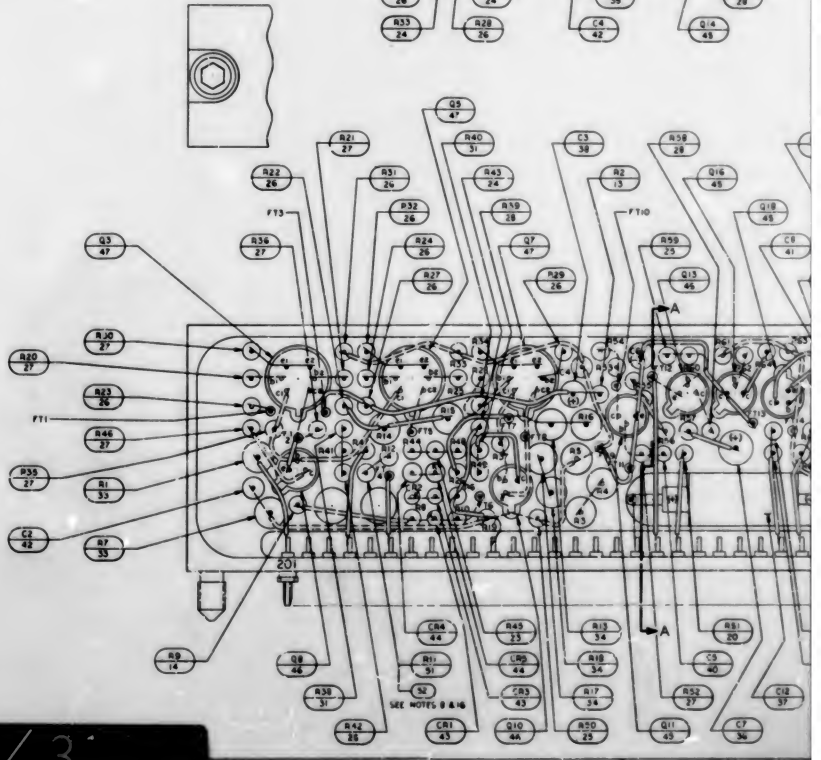
SECTION B-B
FIND NO. 7 & 8 REMOVED FOR CLARITY

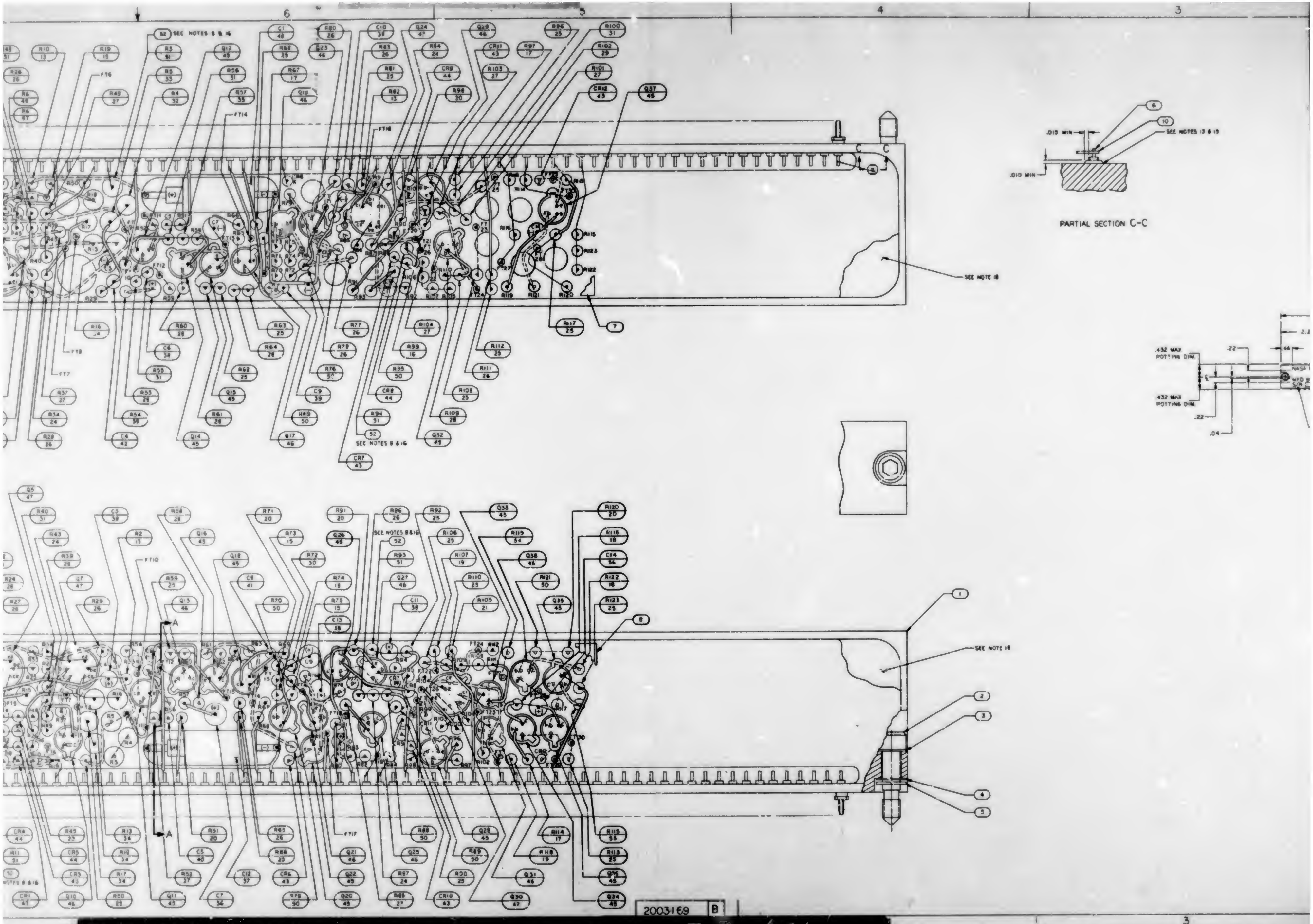


SECTION A-A
FIND NO. 7 & 8 REMOVED FOR CLARITY

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. MARK .10/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
7. MARK .26/24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002127, TYPE II, CLASS 2 USING INK 1006271-1
8. SELECT R3, R12, R94 AND R94 PER APPLICABLE PS FROM APPROPRIATE CHART
9. WELD PER ND1002005
10. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. MOUNTING TORQUE FOR FIND NO. 6 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE III
15. SEAL FIND NO. 6 TO HEADER PER ND1002004, TYPE III
16. ASSEMBLE FIND NO. 52 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
17. STAKE FIND NO. 13 THRU FIND NO. 51 AND FIND NO. 53 THRU FIND NO. 57 TO FIND NO. 1 PER ND1002009 METHOD C OR D
18. ENCAPSULATE PER ND1002002. REMOVE FLASHING
19. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF TS 2003069
20. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II

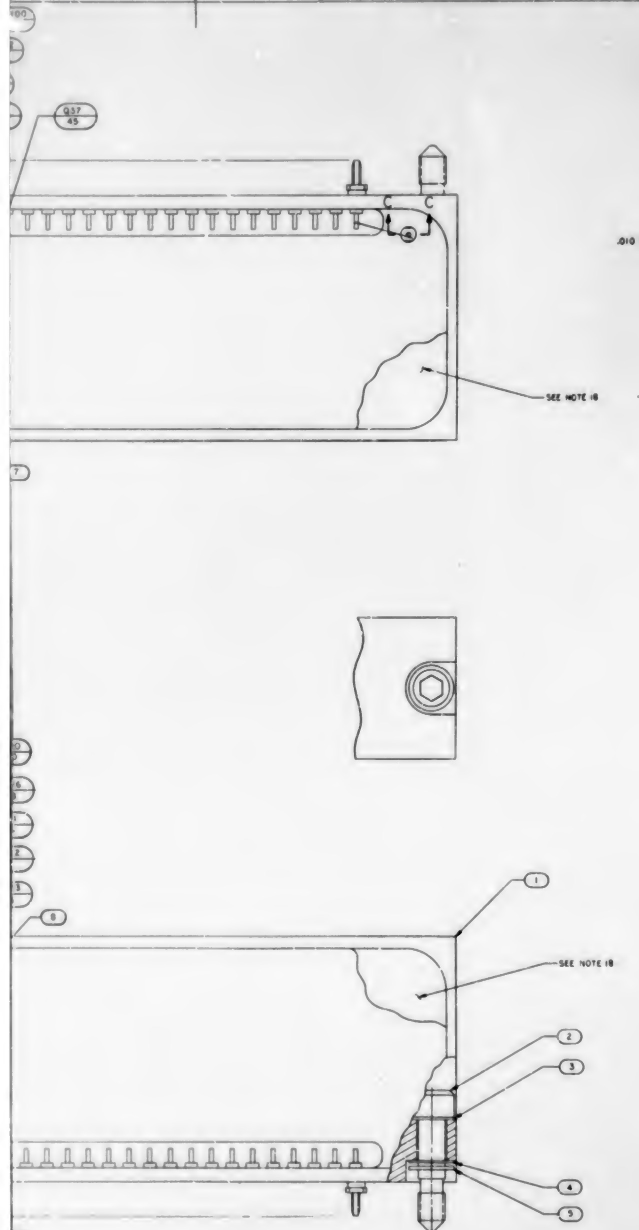


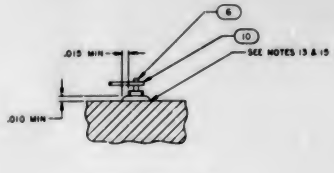




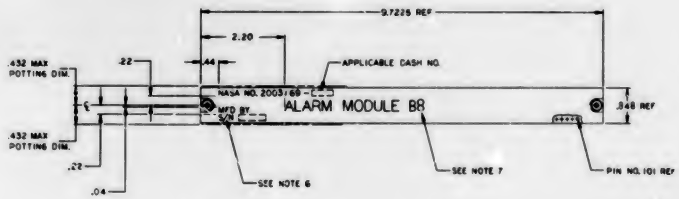
6
5
4
3
SEE NOTES 8 & 16
PARTIAL SECTION C-C
.015 MIN
.010 MIN
SEE NOTES 13 & 15
SEE NOTE 18
.432 MAX POTTING DIM.
.22
.04
SEE NOTE 18
2003169
B

REV	DESCRIPTION
—	RELEASED PER TDRR 25[illegible]
A	REVISED PER TDRR 25775
B	REVISED PER TDRR 25997





PARTIAL SECTION C-C



MARKING VIEW
SCALE 1/1

X	—	2005029	SCHEMATIC	REF
—	X	2005028	SCHEMATIC	REF
1	—	1006750-53	RESISTOR	57
1	1	1006756-69	CAPACITOR	56
1	1	1006755-21	CAPACITOR	55
1	1	1006750-60	RESISTOR	54
1	1	1006750-36	RESISTOR	53
5	5	2004076	INSULATOR, WASHER	52
5	5	SEE NOTE 8	RESISTOR	51
8	8	1006750-39	RESISTOR	50
—	1	1006750-46	RESISTOR	49
1	1	1006755-120	CAPACITOR	48
7	7	1010376-1	TRANSISTOR	47
16	16	2004004-002	TRANSISTOR	46
16	16	2004004-001	TRANSISTOR	45
4	4	2004112-002	DIODE	44
8	8	2004103-001	DIODE	43
2	2	1006777-25	CAPACITOR	42
1	1	1006777-24	CAPACITOR	41
1	1	1006777-20	CAPACITOR	40
1	1	1006755-79	CAPACITOR	39
4	4	1006755-57	CAPACITOR	38
1	1	1006755-36	CAPACITOR	37
1	1	1006755-31	CAPACITOR	36
2	2	1006788-6	RESISTOR	35
6	6	1010377-227	RESISTOR	34
3	3	1010377-51	RESISTOR	33
1	1	1010377-50	RESISTOR	32
6	6	1006750-64	RESISTOR	31
1	1	1006750-65	RESISTOR	30
1	1	1006750-63	RESISTOR	29
9	9	1006750-58	RESISTOR	28
14	14	1006750-56	RESISTOR	27
18	18	1006750-49	RESISTOR	26
17	17	1006750-47	RESISTOR	25
5	5	1006750-43	RESISTOR	24
1	1	1006750-41	RESISTOR	23
1	1	1006750-33	RESISTOR	21
5	5	1006750-32	RESISTOR	20
2	2	1006750-30	RESISTOR	19
3	3	1006750-25	RESISTOR	18
3	3	1006750-15	RESISTOR	17
1	1	1006750-14	RESISTOR	16
3	3	1006750-8	RESISTOR	15
2	2	1006750-6	RESISTOR	14
3	3	1006750-1	RESISTOR	13
AR	AR	1006776-22	INSULATION, SLEEVING	12
AR	AR	1006776-21	INSULATION, SLEEVING	11
AR	AR	1006757-6	WIRE, ELEC	10
AR	AR	1006757-1	WIRE, ELEC	9
1	1	2003077-011	INSULATOR B ASSEMBLY	8
1	1	2004144	INSULATOR A	7
1	1	2004039	TERMINAL, THREADED	6
2	2	MS16633-4015	RING, RETAINING, EXTERNAL, "E"	5
2	2	1004546-3	WASHER, FLAT	4
2	2	1004[illegible]-1	WASHER, FLAT	3
2	2	10045[illegible]-1	SCREW, JACKING	2
1	1	2003032-011	HEADER, HOUSING ASSY	1
-021	-011		LIST OF MATERIAL	

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

ALARM MODULE
B8
ASSEMBLY

80230 | J | 2003169

2003169 | B

[redacted]

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE TDRR 32523		
B	REVISED PER TDRR 33940		SSA

ASSEMBLY INFORMATION CHART

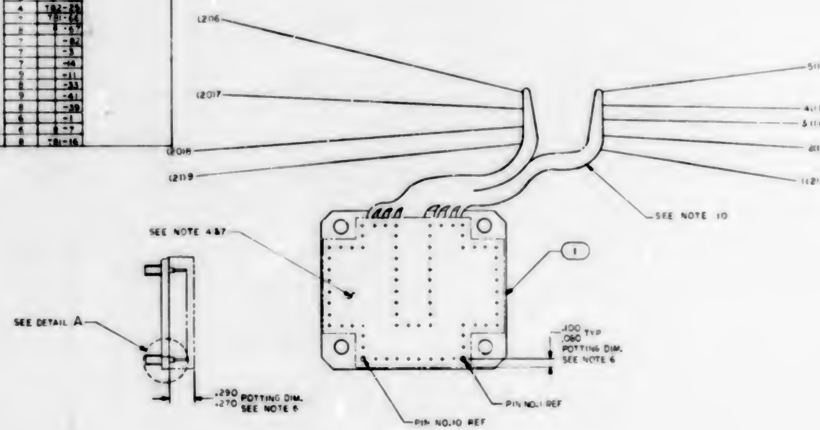
REMARKS	FROM COND IDENT	FROM STA NO.	FROM DES	COLOR	AWG	FIND NO.	TO STA NO.	TO DES	REMARKS
	A1	10	J10-1		30	2	9	TB1-71	
	A2		-2				6	-64	
	A3		-3				9	-69	
	A4		-4				7	-81	
	A5		-5				9	-77	
	A6		-6				9	-79	
	A7		-7				6	TB1-72	
	A8		-8				4	TB2-73	
	A9		-9				3	-91	
	A10		-10	OPT			3	-66	
	A11		-11				2	-84	
	A12		-12				3	-90	
	A13		-13				3	-82	
	A14		-14				4	TB2-81	
	A15		-15				9	TB1-62	
	A16		-16				6	-56	
	A17		-17				6	-60	
	A18		-18				[illegible]	-65	
	A19		-19				7	-74	
	A20		-20				9	-86	
	A21	10	J10-21		30	2	8	TB1-84	
	A22	10	J10-22		30	2	1	TB2-71	
	A23		-23				4	TB2-65	
	A24		-24				1	TB2-70	
	A25		-25				8	TB1-76	
	A26		-26				1	TB2-87	
	A27		-27				3	TB2-83	
	A28		-28				1	TB2-86	
	A29		-29				8	TB1-68	
	A30		-30				7	TB1-57	
	A31		-37				9	TB1-87	
	A32		-38	OPT			3	TB2-74	
	A33		-39				3	TB2-67	
	A34		-40				2	TB2-77	
	A35		-41				6	TB1-42	
	A36		-42				2	TB2-69	
	A37		-43				1	-62	
	A38		-44				2	-85	
	A39		-45				9	-24	
	A40		-46				1	-63	
	A41		-53				3	-34	
	A42	10	J10-54		30	2	1	TB2-38	
	A43	10	J10-55		30	2	6	TB1-30	
	A44		-56				2	TB2-37	
	A45		-57				4	-57	
	A46		-58				3	-50	
	A47		-59				1	-22	
	A48		-60				3	-26	
	A49		-67				1	-39	
	A50		-68				2	TB2-44	
	A51		-69				6	TB1-25	
	A52		-70	OPT			3	TB2-51	
	A53		-71				3	TB2-43	
	A54		-72				1	TB2-55	
	A55		-73				6	TB1-17	
	A56		-74				9	TB1-54	
	A57		-81				3	TB2-67	
	A58		-82				2	-52	
	A59		-83				3	-55	
	A60	10	J10-84		30	2	5	TB2-32	

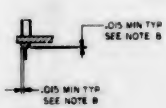
ASSEMBLY INFORMATION CHART

REMARKS	FROM COND IDENT	FROM STA NO.	FROM DES	COLOR	AWG	FIND NO.	TO STA NO.	TO DES	REMARKS
	A61	10	J10-85		30	2	5	TB1-31	
	A62		-86				4	TB2-49	
	A63		-57				1	TB2-31	
	A64		-88				5	TB2-56	
	A65		-94				8	TB1-63	
	A66		-96				6	-24	
	A67		-97				8	-45	
	A68		-98				9	-23	
	A69		-99				6	-19	
	A70		-100				8	-60	
	A71		-101	OPT			7	-32	
	A72		-102				7	TB1-21	
	A73		-109				4	TB2-89	
	A74		-110				6	TB1-18	
	A75		-111				6	TB1-36	
	A76		-112				3	TB2-98	
	A77		-113					TB2-94	
	A78		-114				4	TB2-97	
	A79		-115				9	TB1-47	
	A80		-116				9	TB1-17	
	A81	10	J10-123		30	2	7	TB1-50	
	A82	10	J10-124		30	2	7	TB1-44	
	A83		-125				6	TB1-49	
	A84		-126				1	TB2-102	
	A85		-127				2	TB2-101	
	A86		-128				5	TB1-2	
	A87		-129				5	-48	
	A88		-130				6	-6	
	A89		-137				7	-26	
	A90		-138				8	-51	
	A91		-139				5	-43	
	A92		-140	OPT			7	TB1-15	
	A93		-141				2	TB2-93	
	A94		-142				7	TB1-8	
	A95		-143				9	-53	
	A96		-144				8	-10	
	A97		-146				7	-20	
	A98		-147				8	-46	
	A99		-148				8	-52	
	A100		-149				9	-35	
	A101		-150				8	-89	
	A102	10	J10-151		30	2	7	TB1-38	
	A103	10	J10-152		30	2	8	TB1-40	
	A104		-153				9	TB1-95	
	A105		-154				1	TB2-63	
	A106		-155				1	-30	
	A107		-156				2	-24	
	A108		-157				4	TB2-29	
	A109		-158				7	TB1-66	
	A110		-159				8	-67	
	A111		-160				7	-82	
	A112		-165				7	-3	
	A113		-131	OPT			7	-44	
	A114		-132				9	-11	
	A115		-133				8	-33	
	A116		-134				9	-41	
	A117		-135				8	-39	
	A118		-136				6	-1	
	A119		-117				6	-7	
	A120	10	J10-118		30	2	8	TB1-16	

ASSEMBLY INFORMATION CHART

REMARKS	FROM COND IDENT	FROM STA NO.	FROM DES	COLOR	AWG	FIND NO.	TO STA NO.	TO DES	REMARKS
	A121	10	J10-119		30	2	8	TB1-26	
	A122		-120				7	TB1-27	
	A123		-121				8	TB1-34	
	A124		-122				2	TB2-100	
	A125		-103				2	-76	
	A126		-104				1	-78	
	A127		-105				3	-75	
	A128		-106				5	-80	
	A129		-107				5	-88	
	A130		-108				1	-79	
	A131		-89	OPT			5	TB2-96	
	A132		-90				9	TB1-85	
	A133		-91				8	TB1-75	
	A134		-92				2	TB2-92	
	A135		-93				6	TB1-13	
	A136		-94				9	TB1-61	
	A137		-75				3	TB2-59	
	A138		-76				1	-14	
	A139		-77				2	-36	
	A140		-78				5	-72	
	A141	10	J10-79		30	2	3	TB2-42	
	A142	10	J10-60		30	2	2	TB2-28	
	A143		-61				4	-41	
	A144		-62				5	-64	
	A145		-63				5	-1	
	A146		-64				4	-17	
	A147		-65				2	-53	
	A148		-66				4	-33	
	A149		-47				1	-47	
	A150		-48				2	-68	
	A151		-49	OPT			1	-9	
	A152		-50				5	-54	
	A153		-51				2	-65	
	A154		-52				1	TB2-46	
	A155		-31				9	TB1-70	
	A156		-32				8	-5	
	A157		-33				9	-74	
	A158		-34				7	-73	
	A159		-35				9	-21	
	A160	10	J10-36		30	2	7	TB1-9	





DETAIL A
ROTATED 90° CW

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. WIRE USING ASSEMBLY INFORMATION CHART PER ND1002031
4. DRESS AND TRIM FIND NO. 2, BOND PER ND1001009 (OPTIONAL)
5. IDENTIFY WITH PART NO. PER ND1002019
6. ENCAPSULATE PER ND1002236
7. DRESS FIND NO 2 USING FIND NO 3 ONLY WHERE REQUIRED TO KEEP WIRES WITHIN THE CONFINES OF THE POTTING
8. SEAL INSULATORS OF FIND NO.1 PER ND1002107 TYPE II
9. COLOR OF FIND NO.2 TO BE OPTIONAL
10. FABRICATE PER ND1002032

SEE NOTE 9

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
AR	1012507-001	TAPE	
AR	1006732	WIRE	
1	[illegible]	CONNECTOR PLATE	
-011		LIST OF MATERIAL	

2003884	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE, I.D. WIRED ASSY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	E	2007581
SCALE	WT	SHEET

APOLLO G&N Specification
PS 2003901 Rev. -
Original Issue Date: 5-11-66
Release Authority: TDRR 28742
Class A **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

AGC DSKY POWER SUPPLY ASSEMBLY

(MODULE D7)

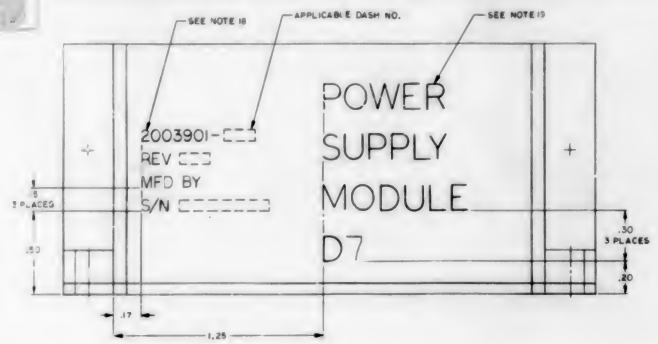
DRAWING NO. 2003901

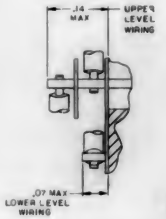
Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals	
				MIT	NASA

This specification consists of pages 1 to 7 inclusive.

APPROVALS	A. C. METZGER NASA/MSC	MIT/IL	RAY





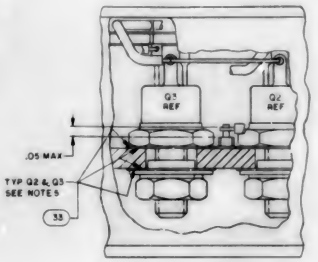
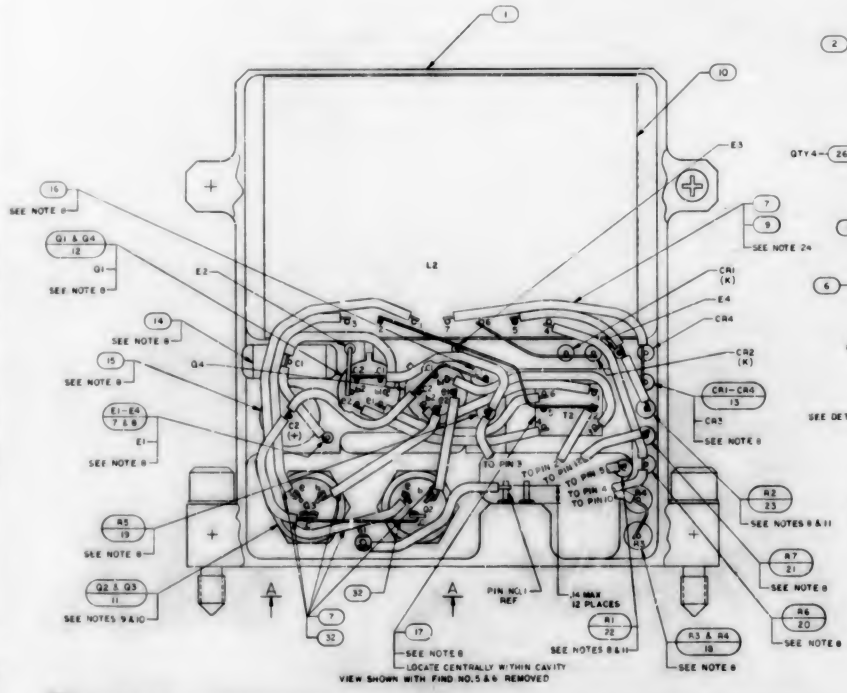


CHART A

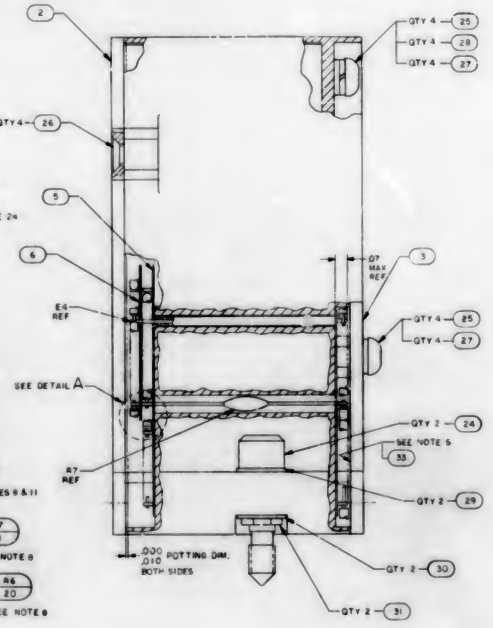
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3320
-45	3600
-46	3900
-47	4300
-48	4700
-126	2950
-127	3.9K
-128	3450
1006750-129	3750

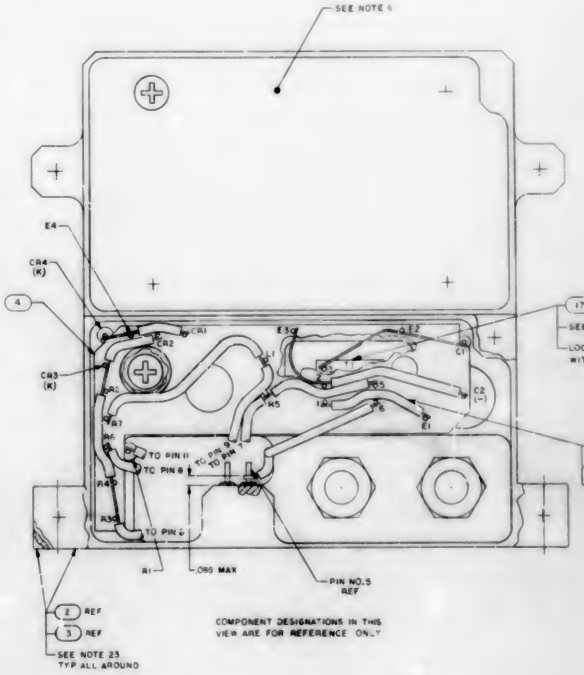
CHART B

PART NO.	VALUE
1006750-19	300
-42	330
-21	510
-39	680
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	500



VIEW SHOWN WITH FIND NO.5 & 6 REMOVED





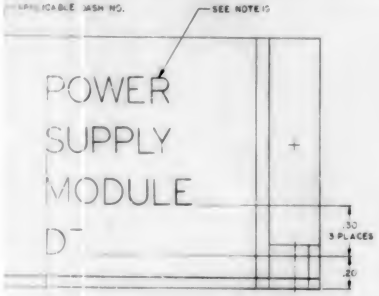
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

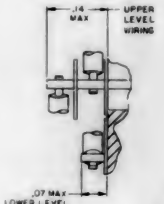
NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002136
5. APPLY FIND NO. 52 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VIEWS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.12 THRU FIND NO. 23 TO FIND NO.1 PER ND1002009 METHOD C OR D
9. NEW MICA WASHERS TO BE INSTALLED EACH TIME FIND NO. 11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO.22 TO BE SELECTED FROM CHART A & FIND NO.23 TO SELECTED FROM CHART B
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS PATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.05 HIGH WHITE CHARACTERS PER ND1002008 & ND1002122, TYPE III, CLASS 2 & SERIALIZE PER ND1002003 USING INK 1006271-1
19. MARK .07/.05 HIGH WHITE CHARACTERS PER ND1002008 & ND1002122, TYPE III, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. – DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO. 9

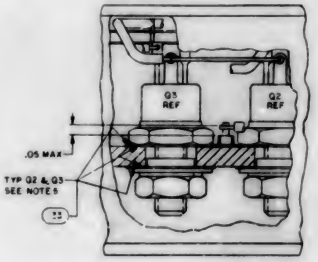
2003901

2003900





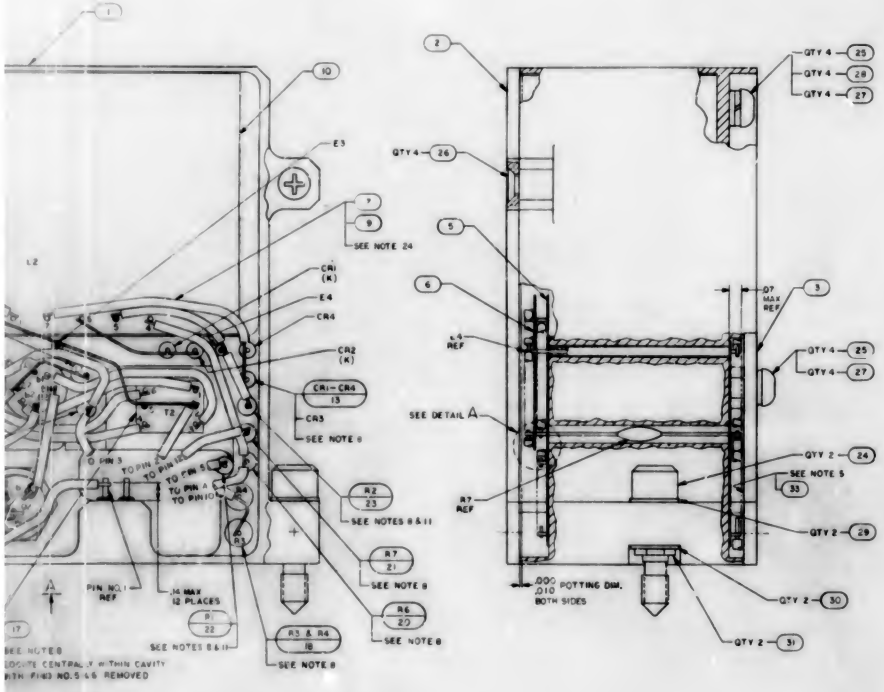
DETAIL A
SCALE 10/1

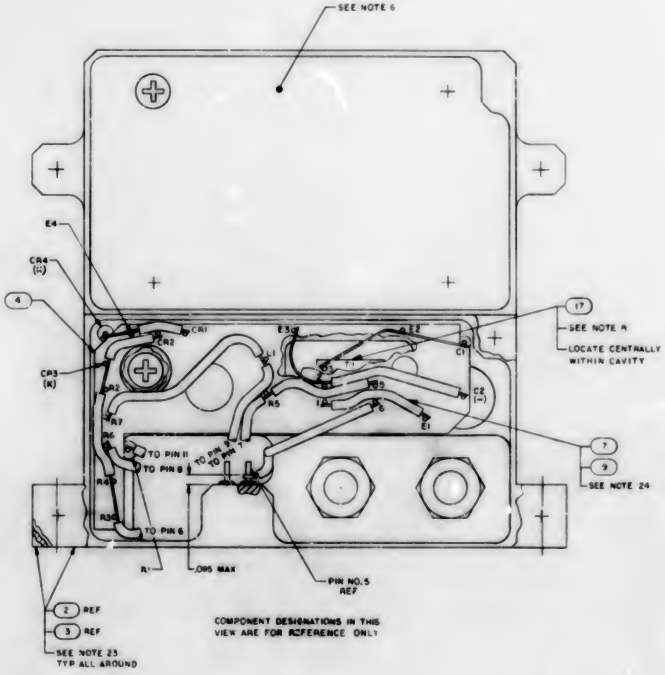


VIEW A-A

CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3320
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3340
-128	3650
1006750-129	3790

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500





COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. - DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF R.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO. 9

	2003904	SCHEMATIC	REF
AR	1006872	SILICONE COMPOUND	33
AR	1006797-15	WIRE, ELECTRICAL	32
2	MS16633-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
4	MS35338-98	WASHER, LOCK, SPLIT	28
8	NAS1620C4	WASHER, FLAT	27
4	MS24693-BC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35215-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, TAPPING	24
1	SEE NOTE 11	RESISTOR, FIXED, FILM	23
1	SEE NOTE 11	RESISTOR, FIXED, FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-92	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
2	1002291-4	TRANSFORMER, AUDIO	17
1	1002406-7	COIL, RF CHOKE	16
1	1006796-131	CAPACITOR, FIXED	15
1	1006760-19	CAPACITOR, FIXED	14
4	2004003-001	TRANSISTOR, SILICON	13
2	1002376-1	TRANSISTOR, SILICON TYPE NPN	12
1	1001365-002	TRANSISTOR, SILICON TYPE NPN	11
1	1006329	REACTOR, SATURABLE	10
AR	1006794-22	SLEEVING, INSULATION	9
AR	1006797-9	WIRE, ELECTRICAL, #20 GA	8
1	2004902	INSULATOR, UPPER LEVEL	7
1	2003901-011	INSULATOR, LOWER LEVEL	6
1	2004934-101	INSULATOR, SLAB	5
1	2004903	COVER, BOTTOM	4
1	2004905	COVER, TOP	3
1	2003921-011	HEADER ASSEMBLY	2
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIAL

2003900	NEXT ASSY	USED ON	APPLICATION

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

CODE IDENT NO.	SIZE	FSCM DRAWING NO.
80230	J	2003901

SCALE 4/1 | WT. | SHEET 1 OF 1

2003901

2003901

1.0 SCOPE

This specification establishes the detail requirements for identification and acceptance of the AGC DSKY Power Supply Module (D7) Part No. 2003901-021.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein.

2.1 EFFECTIVE ISSUES. Unless otherwise specified herein, Military and Government Standards and Specifications shall be the issue in effect on the date of request for proposal or invitation to bid.

SPECIFICATIONS

APOLLO G&N

ND 1002214	General Specification for Preservation, Packaging, Packing, and Container Marking of Apollo Guidance and Navigation Major Assemblies, Assemblies, Subassemblies, Parts and Associated Ground Support Equipment.

DRAWINGS

APOLLO G&N

2003901	POWER SUPPLY ASSEMBLY, MODULE D7 AGC DSKY

(Copies of Specifications, drawings, standards, bulletins, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

2.2 CONFLICTING REQUIREMENTS. In the event of conflict between the requirements of the contract, this specification, and the documents listed in this section, the following order of precedence shall apply and the contractor shall notify MIT APOLLO Management of the conflict as soon as it is determined.

a. The contract

b. This specification

c. Documents listed in this section

3.0 REQUIREMENTS

3.1 PERFORMANCE. The Power Supply Module (D7) consists of a load-regulated push-pull amplifier. The circuitry is such that when an 8 volt (nominal) 800 cps square wave input is filtered and amplified, an open circuit output of 250 VRMS (nominal) at 800 cps is obtained.

3.1.1 Thermal Conditioning. The module shall be subjected to two complete thermal cycles, as specified below prior to acceptance testing:

25°C down to -10°C ± 3.0°C in NLT 20 minutes, held at -10°C ± 3.0°C for NLT 30 minutes, raised to +70°C ± 3.0°C in NLT 40 minutes, held at +70°C ± 3.0°C for NLT 30 minutes, lowered to 25°C in NLT 20 minutes.

3.1.2 Insulation Resistance. The insulation resistance between chassis ground pin 1 and all other pins connected together shall be 100 megohms minimum.

3.1.3 Isolation Resistance. The isolation resistance between pins 4, 6, 8, and 10 connected together and pins 2, 3, 5, 7, 9, 11, and 12 connected together shall be not less than 100 megohms.

3.1.4 Continuity. The resistance between the chassis ground pin 1 and the chassis shall be 0.5 ohms maximum.

3.1.5 Pin To Pin Resistance. All pins not mutually insulated shall exhibit the resistance values shown on the unit schematic.

Reference Values: Pins 3 and 7; 1.0K ± 2%; Pins 9 and 12, 10K ± 2%
Pins 4 and 8, 20K ± 2%; Pins 6 and 10, 11K ± 2%

3.1.6 Input Voltages. The module shall function within the limits specified in Table I when supplied with the DC voltage (nominal and marginal), the proper input signal, and the attenuation of a 10K potentiometer as specified in Figure 1.

3.1.7 Load and Output Characteristics. The module shall develop the output voltages specified in Table I when operated into the equivalent loads specified in Figure 1.

3.1.8 The module shall perform as specified in 3.1.6 and 3.1.7 when installed in an operating DSKY which is being subjected to the vibration requirements specified in the applicable specifications for the DSKY. Acceptance criteria for the module shall be the compliance of the DSKY with its applicable specifications.

3.2 PRODUCT CONFIGURATION

3.2.1 DRAWINGS. The module configuration shall be in accordance with APOLLO G&N Drawing 2003901 and all drawings and engineering data referenced thereon.

3.2.2 Weight. Maximum allowable weight of the module shall be 0.90 pounds.

Table 1 - NOMINAL AND MARGINAL OPERATION

		Pin 4 to 6 (EV250 to EVLO)				Pin 8 to 6 (EVH11 to EVLO)			
Input Voltages VDC		Load* Condition		Output Voltage (Vrms)**		Load* Condition		Output Voltage (Vrms)**	
14VDC	25VDC ***	No load	Full load	+25°C	-10°C +80°C	No load	Full load	+25°C	-10°C +80°C
14.0±0.1	25.0±0.2	X		250±10	250±30	X		247±10	247±30
14.0±0.1	25.0±0.2		X	250+10 -15	250±30		X	240+10 -15	240±30
14.0±0.1	21.0±0.2		X	250+10 -20	250+30 -35		X	240+10 -15	240+30 -35
14.0±0.1	18.0±0.2		X	250+10 -45	250+30 -60		X	240+10 -40	240+30 -60
14.0±0.1	36.0±0.2		X	250+15 -15	250+35 -30		X	240+15 -15	240+35 -30
15.0±0.1	25.0±0.2		X	250+40 -0	250+60 -0		X	240+40 -0	240+60 -0
17.0±0.1	25.0±0.2	X		250+80 -0		X		247+80 -0	
12.0±0.1	18.0±0.2		X	250+0 -60			X	240+0 -60	

*Full Load, . erwise designated, is the application of both the EV250 and EVH11 loads.

**Variable from 0 to the values shown by varying the external potentiometer from minimum to maximum resistance.

***25 VDC Source Current, with the 10K potentiometer at max resistance, shall be MNT 75 milliamperes at NO LOAD and MNT 160 ma at FULL LOAD when measured at nominal input voltage at 25°C.

4.2 TESTS/VERIFICATION

4.2.1 Drawing Compliance. The modules shall be examined for compliance with the requirements of APOLLO G&N Drawing 2003901. Particular attention shall be given to inspection for contaminants, pin misalignment, legibility and appearance of marking, and damage to surfaces, structure and equipment.

4.2.2 Thermal Conditioning. Verify that the module was subjected to two complete thermal cycles as specified in 3.1.1 prior to performing the acceptance tests specified herein.

4.2.3 Insulation Resistance. Using test equipment with a test potential of 500 VDC limited to a short circuit current of 1.0 milliampere, measure the resistance between pin 1 and all other pins connected together. Verify that the resistance complies with that specified in paragraph 3.1.2.

4.2.4 Isolation Resistance. Using test equipment with a test potential of 500 VDC limited to a short circuit current of 1 milliampere, measure the resistance between pins 2, 3, 5, 7, 9, 11, and 12 connected together and pins 4, 6, 8, and 10 connected together to determine compliance with paragraph 3.1.3

4.2.5 Inputs-Outputs. Apply the input voltage and input signal with the load and input impedance connections as shown in Figure 1. Measure the output at points indicated to determine compliance with Table I at 25°C.

4.2.6 Pin to Pin. Measure the resistance between Pins 3 and 7, 4 and 8, 6 and 10, and 9 and 12 to determine compliance with Paragraph 3.1.5.

4.2.7 Continuity. Verify that the resistance measured between chassis ground pin 1 and the chassis complies with that specified in Paragraph 3.1.4.

4.2.8 Workmanship. The following tests shall be performed under the conditions specified as a verification of good workmanship.

4.2.8.1 Vibration. Install the module in DSKY. Subject the DSKY to the vibration tests specified in paragraph 3.1.8. Verify that the DSKY meets the requirements of the applicable specification.

4.2.8.2 Thermal Extremes and Marginal Voltages. Repeat the test of Paragraph 4.2.5 at -10°C +0, -2.8°C and +80°C -0, +2.8°C to determine compliance with Table I. Modules shall be stabilized at thermal extremes for ½ hour before testing.

4.2.8.3 Weight. Weigh the module to the nearest .01 pound. Verify that the weight does not exceed the maximum allowable weight specified in paragraph 3.2.2.

5.0 PREPARATION FOR DELIVERY

5.1 Preparation for delivery shall be in accordance with Specification ND 1002211.

6.0 NOTES: None

APOLLO G&N Specification
PS 2003901 Rev. A
Original Issue Date: 5-11-66
Release Authority: TDRR 28742
Class A **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

AGC DSKY POWER SUPPLY ASSEMBLY

(MODULE DT)

DRAWING NO. 2003901

Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals	
				MIT	NASA
(M) 8/1/66	A	29206	1 and [illegible]	[illegible]	[illegible]

This specification consists of pages 1 to [illegible] inclusive.

APPROVALS	A. C. METZGER	[signatures]	[signatures]
	NASA/MSC	MIT/IL	RAY

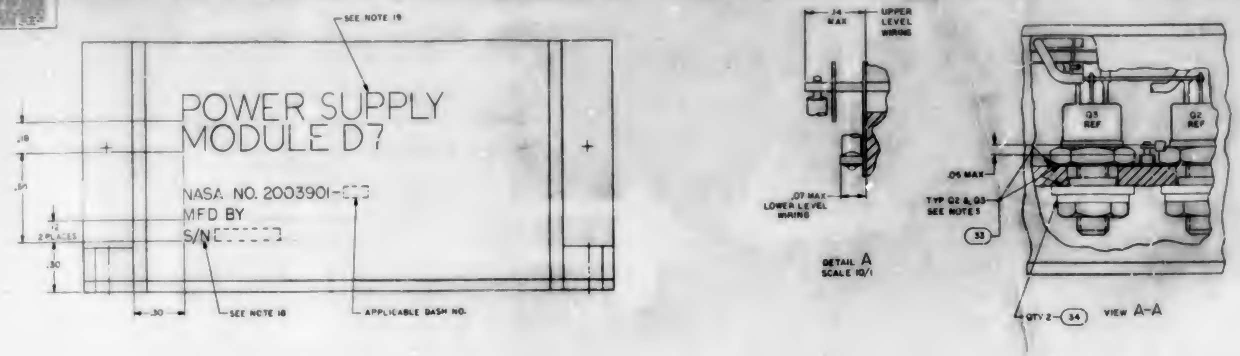
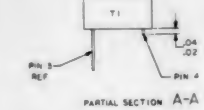
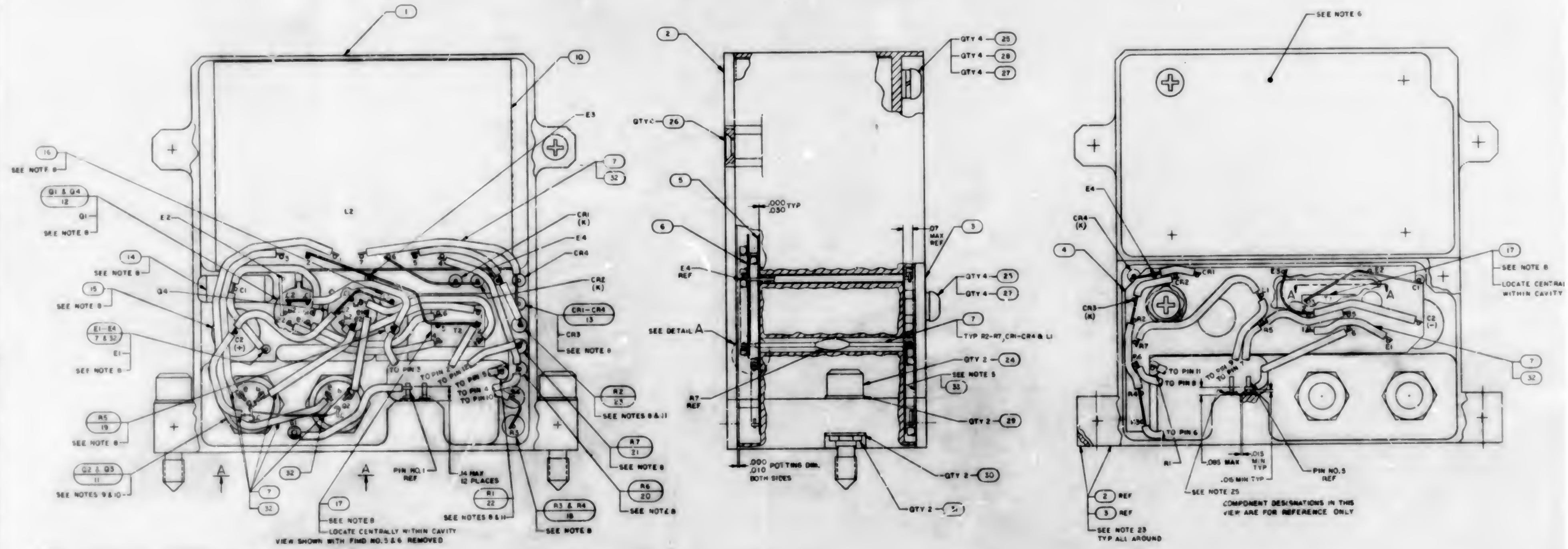


CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500



PARTIAL SECTION A-A



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002236
5. A[illegible] NO. 33 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VIEWS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.12 THRU FIND NO. 23 & E1-E4 TO FIND NO.1 PER ND1002009 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO. 11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. FIND NO.22 TO BE SELECTED FROM CHART A & FIND NO.23 TO SELECTED FROM CHART B
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002089
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.08 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002098 USING INK 1006271-1
19. MARK .12/.15 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.8~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE VI

2003900

2003901 A

A 2003901

REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 22756		

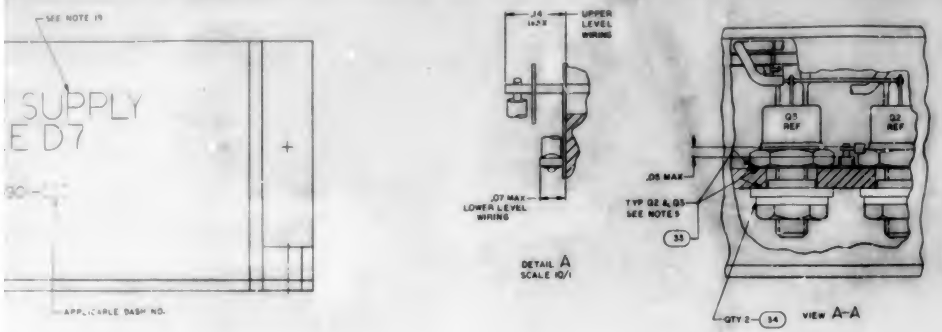
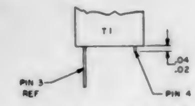
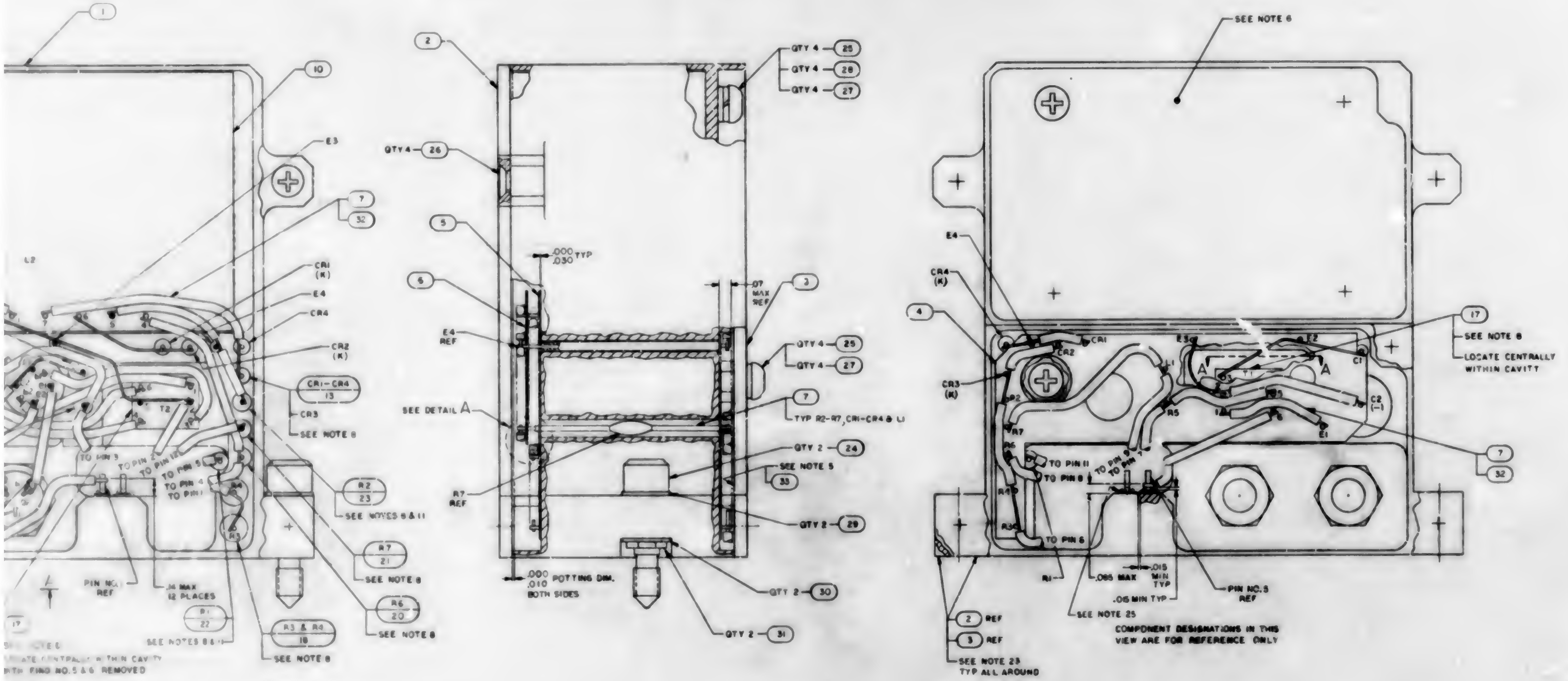


CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2950
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500



PARTIAL SECTION A-A



SEE NOTE 6
...CATE CENTRALLY WITHIN CAVITY
...ITH FIND NO.5 & 6 REMOVED

...D BY NO. D-70327

...ASSEMBLED

... ELECTRICAL
...TO SELECTED

...E WITH ND1002088
...ART NUMBER

...2, TYPE II, CLASS 2

... TYPE II, CLASS 2

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. – DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
~~24. [illegible]~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE VI

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	MS15795-808	WASHER, FLAT	34
X	2005904	SCHEMATIC	REF
AR	1006879	SILICONE COMPOUND	33
AR	1006757-3	WIRE, ELECTRICAL .020 DIA	32
2	MS16633-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
4	MS35338-78	WASHER, LOCK, SPLIT	28
8	NAS620C4	WASHER, FLAT	27
4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, JACKING	24
1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-72	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
2	1010291-4	TRANSFORMER, AUDIO	17
1	1010406-7	COIL, RF CHOKE	16
1	1006793-134	CAPACITOR, FIXED	15
1	1006793-19	CAPACITOR, FIXED	14
4	2004103-001	SEMICONDUCTOR DEVICE, DIODE	13
2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1006325	REACTOR, SATURABLE	10
[illegible]	[illegible]	[illegible]	9
[illegible]	[illegible]	[illegible]	8
AR	1006776-22	SLEEVING, INSULATION	7
1	2004902	INSULATOR, UPPER LEVEL	6
1	2004901-011	INSULATOR, LOWER LEVEL	5
1	2004934-011	INSULATOR, REAR	4
1	2004906	COVER, BOTTOM	3
1	2004905	COVER, TOP	2
1	2003921-011	HEADER ASSEMBLY	1

011 LIST OF MATERIALS

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

2003900 NEXT ASSY

80230 J 2003901

2003901

2003901 A

Table 1 - NOMINAL AND MARGINAL OPERATION

Input Voltages VDC		Pin 4 to 6 (EV250 to EVLO)				Pin 8 to 6 (EVH11 to EVLO)			
		Load* Condition		Output Voltage (Vrms)		Load* Condition		Output Voltage (Vrms)	
14VDC	25VDC ***	No load	Full load	+25°C	-10°C +80°C	No load	Full load	+25°C	-10°C +80°C
14.0±0.1	25.0±0.2	X		255+15 -10 **	255±30 **	X		250+15 -10	250±30
14.0±0.1	25.0±0.2		X	255±10	255±30		X	245±10	245±30
14.0±0.1	21.0±0.2		X	255+10 -20	255+30 -35		X	245+10 -15	245+30 -35
14.0±0.1	18.0±0.2		X	255+10 -45	255+30 -60		X	245+10 -40	245+30 -60
14.0±0.1	36.0±0.2		X	255±15	255+35 -30		X	245±15	245+35 -30
15.0±0.1	25.0±0.2		X	255+40 -0	255+60 -0		X	245+40 -0	245+60 -0
17.0±0.1	25.0±0.2	X		255+75 -0 **	255+90 -0	X		250+75 -0	250+90 -0
12.0±0.1	18.0±0.2		X	255+0 -60	255+0 -80		X	245+0 -60	245+0 -80

*Full Load, wherever designated, is the application of both the EV250 and EVH11 loads.

**Variable from 0 to the values shown by varying the external potentiometer from minimum to maximum resistance.

***25 VDC Source Current, with the 10K potentiometer at max resistance, shall be NMT 75 milliamperes at NO LOAD and NMT 160 ma at FULL LOAD when measured at nominal input voltage at 25°C, -10°C, and +80°C.

4.2 TESTS/VERIFICATION

4.2.1 Drawing Compliance. The modules shall be examined for compliance with the requirements of APOLLO G&N Drawing 2003901. Particular attention shall be given to inspection for contaminants, pin misalignment, legibility and appearance of marking, and damage to surfaces, structure and equipment.

4.2.2 Thermal Conditioning. Verify that the module was subjected to two complete thermal cycles as specified in 3.1.1 prior to performing the acceptance tests specified herein.

4.2.3 Insulation Resistance. Using test equipment with a test potential of 500 VDC limited to a short circuit current of 1.0 milliampere, measure the resistance between pin 1 and all other pins connected together. Verify that the resistance complies with that specified in paragraph 3.1.2.

4.2.4 Isolation Resistance. Using test equipment with a test potential of 500 VDC limited to a short circuit current of 1 milliampere, measure the resistance between pins 2, 3, 5, 7, 9, 11, and 12 connected together and pins 4, 6, 8, and 10 connected together to determine compliance with paragraph 3.1.3

4.2.5 Inputs-Outputs. Apply the input voltage and input signal with the load and input impedance connections as shown in Figure 1. Measure the output at points indicated to determine compliance with Table I at 25°C.

4.2.6 Pin to Pin. Measure the resistance between Pins 3 and 7, 4 and 8, 6 and 10, and 9 and 12 to determine compliance with Paragraph 3.1.5.

4.2.7 Continuity. Verify that the resistance measured between chassis ground pin 1 and the chassis complies with that specified in Paragraph 3.1.4. Anodizing may be penetrated to assure good electrical connection.

4.2.8 Workmanship. The following tests shall be performed under the conditions specified as a verification of good workmanship.

4.2.8.1 Vibration. Install the module in DSKY. Subject the DSKY to the vibration tests specified in paragraph 3.1.8. Verify that the DSKY meets the requirements of the applicable specification.

4.2.8.2 Thermal Extremes and Marginal Voltages. Repeat the test of Paragraph 4.2.5 at -10°C +0, -2.8°C and +80°C -0, +2.8°C to determine compliance with Table I. Modules shall be stabilized at thermal extremes for ½ hour before testing.

4.2.8.3 Weight. Weigh the module to the nearest .01 pound. Verify that the weight does not exceed the maximum allowable weight specified in paragraph 3.2.2.

5.0 PREPARATION FOR DELIVERY

5.1 Preparation for delivery shall be in accordance with Specification ND 1002214.

6.0 NOTES: None

APOLLO G&N Specification
PS 2003901 Rev. B
Original Issue Date: 5-11-66
Release Authority: TDRR 28742
Class A **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

AGC DSKY POWER SUPPLY ASSEMBLY

(MODULE D7)

DRAWING NO. 2003901

Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
(M) 5/1/66	A	29206	1 and [illegible]	[illegible] FR	[illegible] FM
(M) 7/1/66	B	29923	1 and 5	[illegible] FR	[illegible] FM

This specification consists of pages 1 to 7 inclusive.

APPROVALS	A. C. METZGER NASA/MSC	[illegible] MIT/IL	[illegible] 25 MAR 66 [illegible] 4/14/66 RAY [illegible] 5-1-66

POWER SUPPLY MODULE D7

NASA NO 2003901-[ ]
MFD BY
S N [ ]

SEE NOTE 19 · SEE NOTE 18 · APPLICABLE DASH NO.

DETAIL A
SCALE 10/1

VIEW A-A

CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	360
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500

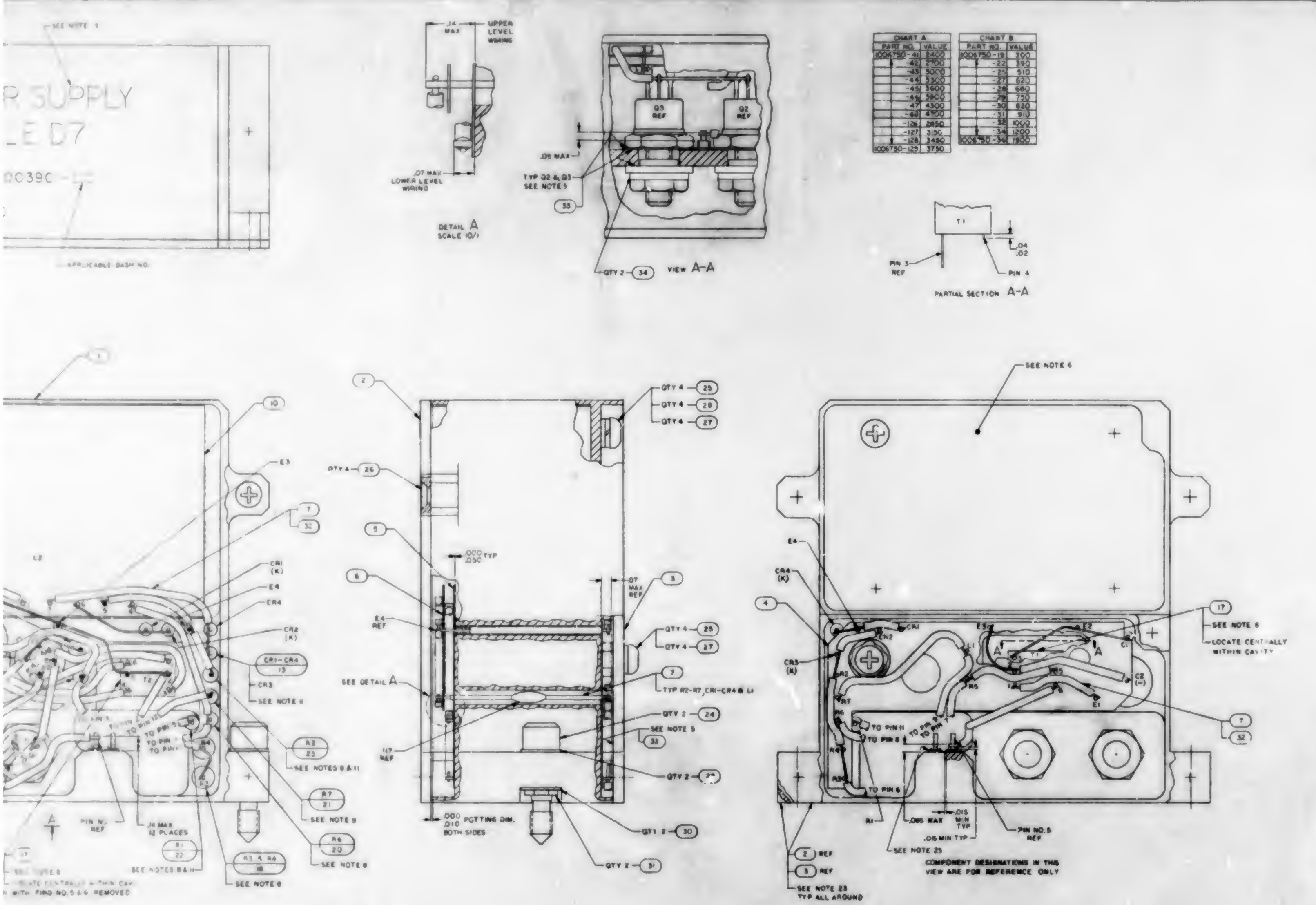
PARTIAL SECTION A-A

VIEW SHOWN WITH FIND NO.5 & 6 REMOVED

COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-STD-100
2. WELD PER ND1002005
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002136
5. APPLICATION NO. 5 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VIEWS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.12 THRU FIND NO.25 & L-E4 TO FIND NO.1 PER ND1002009 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO.11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO.22 TO BE SELECTED FROM CHART A & FIND NO.23 TO SELECTED FROM CHART B.
12. AN DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002009
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.09 HIGH WHITE CHARACTERS PER ND1002008 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002005 USING DIE 1006271-1
19. MARK .07/.09 HIGH WHITE CHARACTERS PER ND1002008 & ND1002122, TYPE II, CLASS 2 USING DIE 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. – DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF M.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9
25. SEAL INSULATORS OF FIND NO.1 PER ND1002024 TYPE III

2003901 B



2003901	B

SYM	DESCRIPTION
A	REVISED PER TDRR 22181
B	REVISED PER TDRR 23234

CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE XI

SEE NOTE 8
LOCATE CENTRALLY WITHIN CAV…
…N WITH FIND NO. 5 & 6 REMOVED
…ED BY MIL-D-70327
…DISASSEMBLED
…AT ELECTRICAL
…S TO SELECTED
…WIRING
…NCE WITH ND1002089
…NUMBER
…, TYPE II, CLASS 2
…, TYPE II, CLASS 2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	MS15795-808	WASHER, FLAT	34
X	2005904	SCHEMATIC	REF
AR	1006319	SILICONE COMPOUND	33
AR	1006757-15	WIRE, ELECTRICAL .020 DIA	32
2	MS16633-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
4	MS35338-78	WASHER, LOCK, SPLIT	28
8	NAS620C4	WASHER, FLAT	27
4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, JACKING	24
1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-72	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
2	1010291-4	TRANSFORMER, AUDIO	17
1	1011406-7	COIL, RF CHOKE	16
1	1006755-134	CAPACITOR, FIXED	15
1	1006793-19	CAPACITOR, FIXED	14
4	2004163-001	SEMICONDUCTOR DEVICE, DIODE	13
2	1010375-1	TRANSISTOR, SILICON, TYPE NPN	12
2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1006325	REACTOR, SATURABLE	10
[illegible]	[illegible]	WIRE, ELECTRICAL [illegible]	[illegible]
[illegible]	[illegible]	WIRE, ELECTRICAL [illegible]	[illegible]
AR	1006776-22	SLEEVING, INSULATION	7
1	2004902	INSULATOR, UPPER LEVEL	[illegible]
1	2004901-011	INSULATOR, LOWER LEVEL	[illegible]
1	2004934-011	INSULATOR, BEAR	[illegible]
1	2004900	COVER, BOTTOM	[illegible]
1	2004905	COVER, TOP	[illegible]
1	2003921-011	HEADER ASSEMBLY	[illegible]

LIST OF MATERIALS

2003985
2003900
NEXT ASSY — USED ON
APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

80230 J 2003901

2003901 B

F-2/2

APOLLO G&N Specification
PS 2003901 Rev. C
Original Issue Date: 5-11-66
Release Authority: TDRR 28742
Class A **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

AGC DSKY POWER SUPPLY ASSEMBLY

(MODULE D7)

DRAWING NO. 2003901

Record of Revisions

	Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
M	6/1/66	A	29206	1 and 5 & 7	FR	FR
M	7/1/66	B	29923	1 and 5	FR	FR
M	9/1/66	C	30871	1, 3	FR	FR

This specification consists of pages 1 to 7 inclusive.

APPROVALS	A. C. METZGER NASA/MSC	QC [illegible] 5/11/66 MIT/IL	[illegible] 25 May 66 [illegible] 5/11/66 RAY

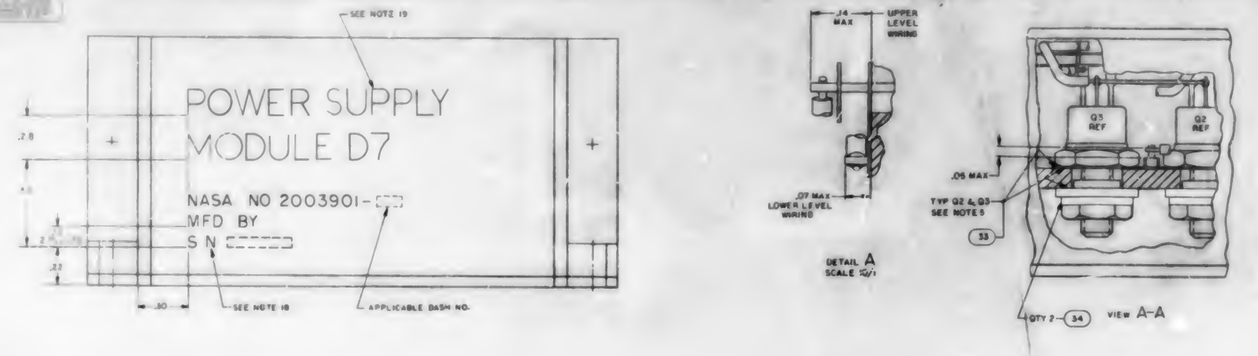
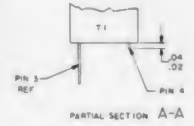
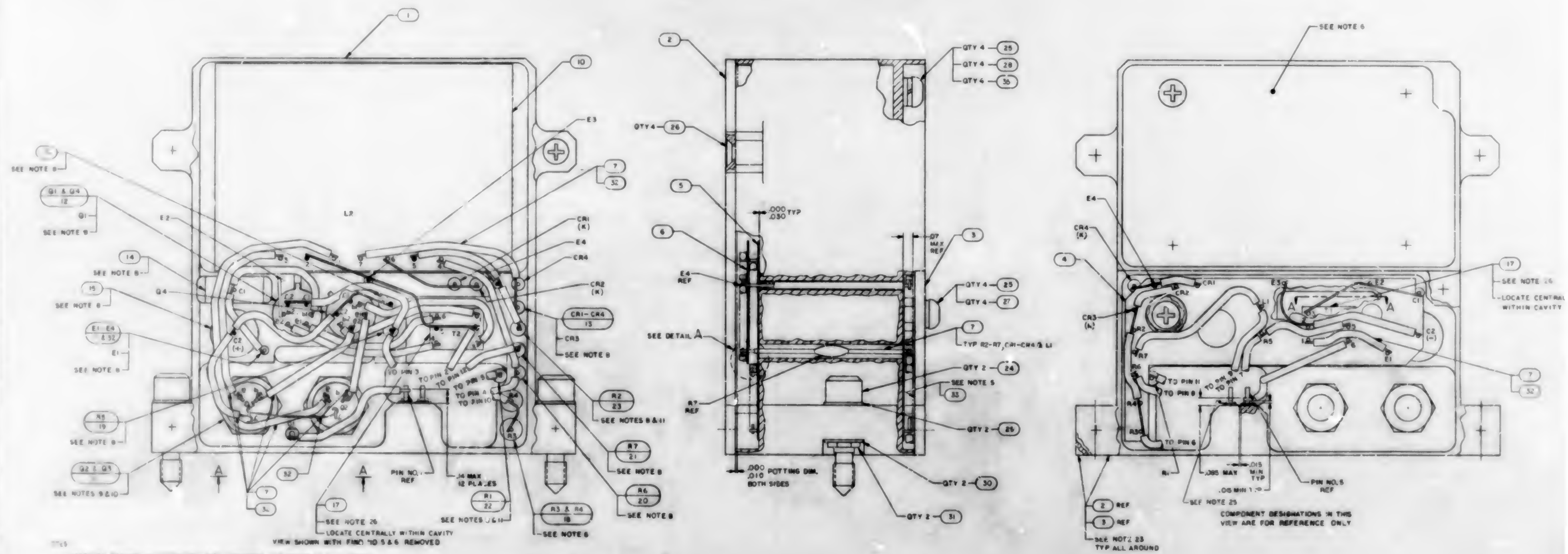


CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500





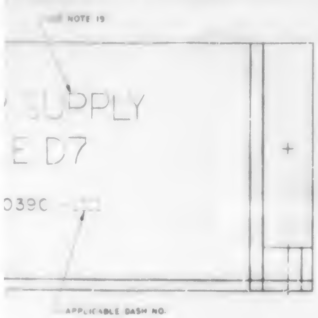
1. [illegible] DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. [illegible]
3. [illegible] SOLDER PER ND1002075
4. ENCAPSULATE PER [illegible]
5. APPLY FIND NO. 33 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL [illegible] SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO. [illegible] AND FIND NO. [illegible] THRU FIND NO. 23 [illegible] TO FIND NO. [illegible] PER ND[illegible]2009 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO. 11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO. 11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO. 22 TO BE SELECTED FROM CHART A & FIND NO. 23 TO SELECTED FROM CHART B
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002089
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.03 HIGH WHITE CHARACTERS PER ND1002000 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002025 USING [illegible] 1006271-1
19. MARK .17/.13 HIGH WHITE CHARACTERS PER ND1002000 & ND1002122, TYPE II, CLASS 2 USING [illegible] 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF D.S. 2003901
23. FIND NO. 2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO. 1
24. [illegible]
25. SEAL INSULATORS OF FIND NO. 1 PER ND1008004 TYPE II
26. STAKE FIND NO. 17 TO FIND NO. 1 PER ND1002004 TYPE II

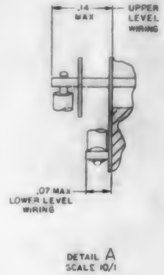
F 1/2

2003901 C

C	2003901	

SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 22161 DR CHK APPD		
B	REVISED PER TDRR 23234 DR CHK APPD		
C	REVISED PER TDRR 23[illegible] DR CHK APPD		





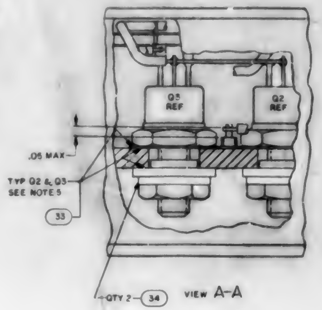
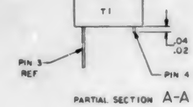
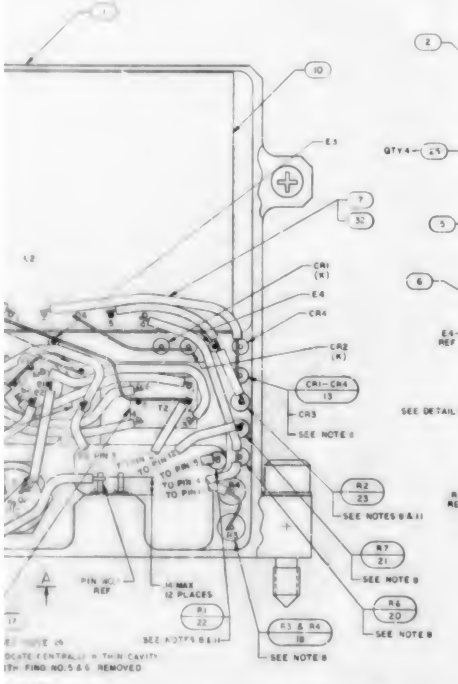
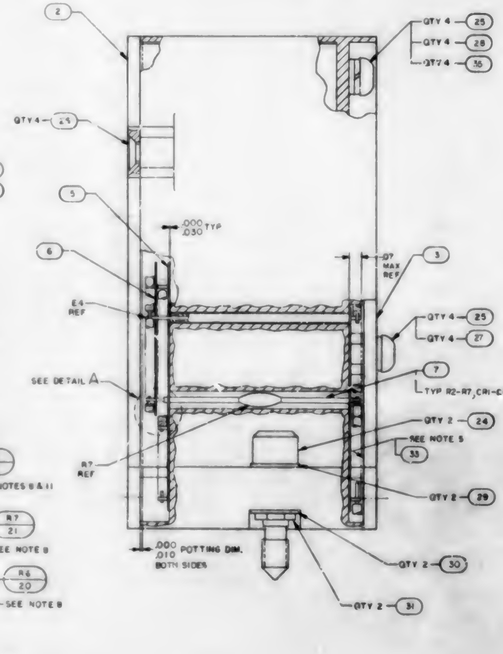


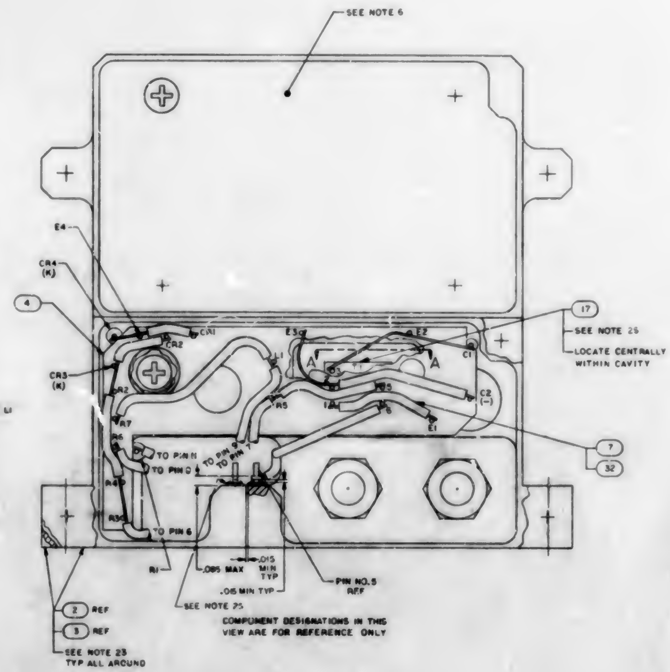
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500









ASSEMBLED

ELECTRICAL
D. SELECTED

WITH ND1002069
NUMBER

, TYPE II, CLASS 2

, TYPE II, CLASS 2

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE III
26. STAKE FIND NO.17 TO FIND NO. PER ND1002004 TYPE I

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
4	MS15795-813	WASHER, FLAT	35
2	MS15795-808	WASHER, FLAT	34
X	2005904	SCHEMATIC	REF
AR	1006879	SILICONE COMPOUND	33
AR	1006757-13	WIRE, ELECTRICAL .020 DIA	32
2	MS16633-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
2	MS35338-78	WASHER, LOCK, SPLIT	28
4	NAS620C4	WASHER, FLAT	27
4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, JACKING	24
1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-72	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
2	1010291-4	TRANSFORMER, AUDIO	17
1	1010406-7	COIL, RF CHOKE	16
1	1006755-134	CAPACITOR, FIXED	15
1	1006793-19	CAPACITOR, FIXED	14
4	2004103-001	SEMICONDUCTOR DEVICE, DIODE	13
2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1006323	REACTOR, SATURABLE	10
[illegible]	[illegible]	~~WIRE, ELECTRICAL [illegible]~~	9
[illegible]	[illegible]	~~WIRE, ELECTRICAL [illegible]~~	8
AR	1006776-22	SLEEVING, INSULATION	7
1	2004902	INSULATOR, UPPER LEVEL	6
1	2004901-011	INSULATOR, LOWER LEVEL	5
1	2004934-	INSULATOR, REAR	4
1	2004906	COVER, BOTTOM	3
1	2004905	COVER, TOP	2
1	2003971-011	HEADER ASSEMBLY	1
01	LIST OF MATERIALS		

NEXT ASSY	USED ON
2003985	
2003900	
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ±.02 ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY
MODULE
AGC DSKY

CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003901

SCALE 4/1 | SHEET 1 OF 1

2003901 C

2003901

F-2/2

3.0 REQUIREMENTS

3.1 PERFORMANCE. The Power Supply Module (D7) consists of a load-regulated push-pull amplifier. The circuitry is such that when an 8 volt (nominal) 800 cps square wave input is filtered and amplified, an open circuit output of 250 VRMS (nominal) at 800 cps is obtained.

3.1.1 Thermal Conditioning. The module shall be subjected to two complete thermal cycles, as specified below prior to acceptance testing:

25°C down to -10°C ± 3.0°C in NLT 20 minutes, held at -10°C ± 3.0°C for NLT 30 minutes, raised to +70°C ± 3.0°C in NLT 40 minutes, held at +70°C ± 3.0°C for NLT 30 minutes, lowered to 25°C in NLT 20 minutes.

3.1.2 Insulation Resistance. The insulation resistance between chassis ground pin 1 and all other pins connected together shall be 100 megohms minimum.

3.1.3 Isolation Resistance. The isolation resistance between pins 4, 6, 8, and 10 connected together and pins 2, 3, 5, 7, 9, 11, and 12 connected together shall be not less than 100 megohms.

3.1.4 Continuity. The resistance between the chassis ground pin 1 and the chassis shall be 0.5 ohms maximum.

3.1.5 Pin To Pin Resistance. All pins not mutually insulated shall exhibit the resistance values shown on the unit schematic.

Reference Values: Pins 3 and 7; 1.0K ± 2%; Pins 9 and 12, 10K ± 2%
Pins 4 and 8, 20K ± 2%; Pins 6 and 10, 11K ± 2%

3.1.6 Input Voltages. The module shall function within the limits specified in Table I when supplied with the DC voltage (nominal and marginal), the proper input signal, and the attenuation of a 10K potentiometer as specified in Figure 1.

3.1.7 Load and Output Characteristics. The module shall develop the output voltages specified in Table I when operated into the equivalent loads specified in Figure 1.

3.1.8 The module shall perform as specified in 3.1.6 and 3.1.7 when installed in an operating DSKY which is being subjected to the vibration requirements specified in the applicable specifications for the DSKY. Acceptance criteria for the module shall be the compliance of the DSKY with its applicable specifications.

3.2 PRODUCT CONFIGURATION

3.2.1 DRAWINGS. The module configuration shall be in accordance with APOLLO G&N Drawing 2003901 and all drawings and engineering data referenced thereon.

3.2.2 Weight. Maximum allowable weight of the module shall be 0.91 pounds.

APOLLO G&N Specification
PS 2003901 Rev. D
Original Issue Date: 5-11-66
Release Authority: TDRR 28742
Class A **Release**

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

AGC DSKY POWER SUPPLY ASSEMBLY

(MODULE D7)

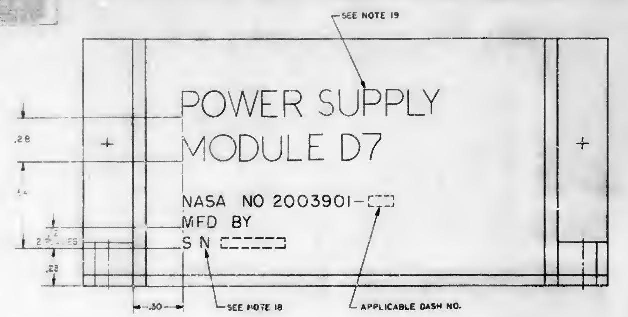
DRAWING NO. 2003901

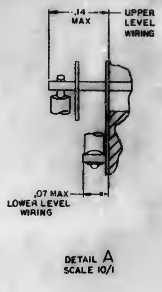
Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
M 6/1/66	A	29206	1 and 5 & 7	[signature]	[signature]
M 7/1/66	B	29923	1 and 5	[signature]	[signature]
M 9/1/66	C	30871	1, 3	[signature]	[signature]
M 1/6/67	D	32574	1, 2	[signature]	[signature]

This specification consists of pages 1 **to** 7 **inclusive.**

APPROVALS	A. C. METZGER NASA/MSC	[signatures] 5/11-66 MIT/IL	D. M. Sleeper 25 MAR 66 4/1/66 4/1/66 RAY 4-1-66





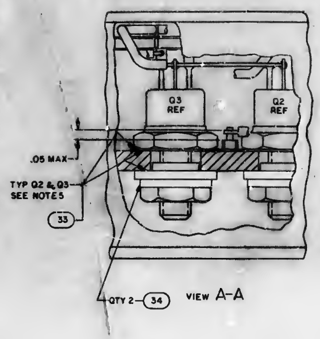
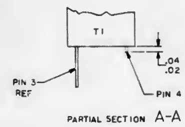
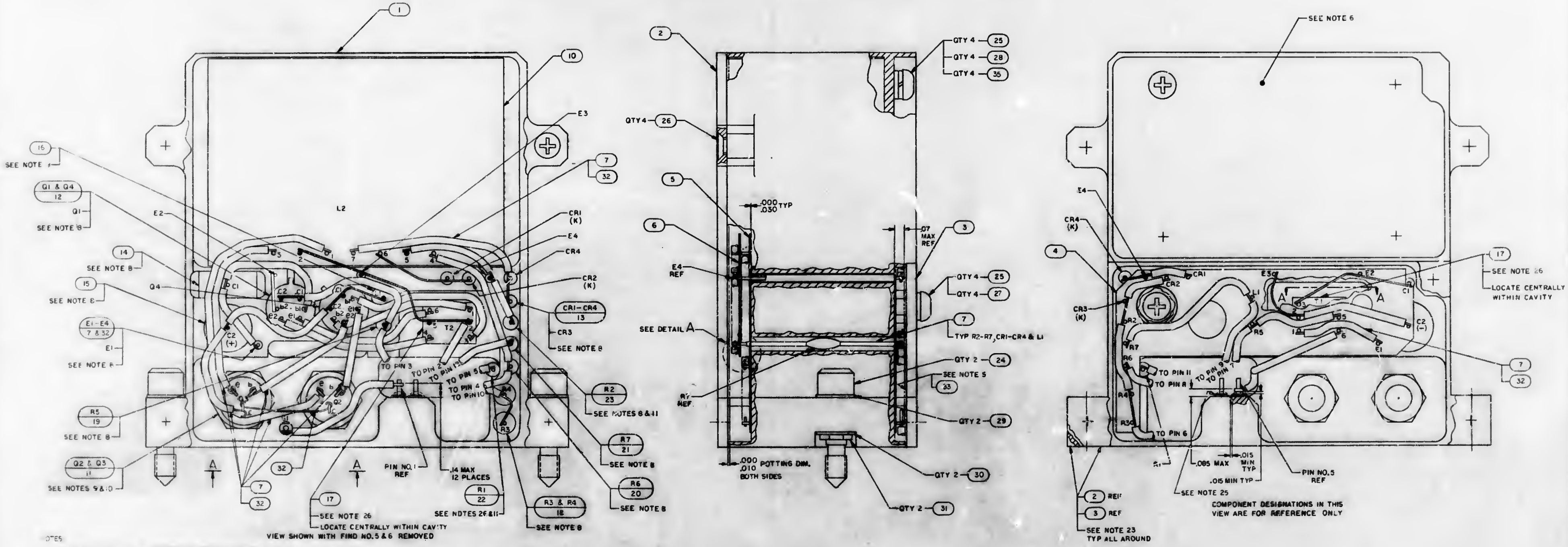


CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-126	3450
1006750-129	3750

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500





NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER [illegible]
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002236
5. APPLY FIND NO.33 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VIEWS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.2 THRU FIND NO.16, FIND NO.18 THRU FIND NO.21, FIND NO.23 & E1-E4 TO FIND NO.1 PER ND1002009 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO.11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE [illegible]-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO.22 TO BE SELECTED FROM CHART A & FIND NO.23 TO SELECTED FROM CHART B
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002009
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.05 HIGH WHITE CHARACTERS PER ND1002009 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002025 USING INK 1006271-1
19. MARK .17/.15 HIGH WHITE CHARACTERS PER ND1002009 & ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE XI
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002004 TYPE V

2003885	
2003900	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ± .02

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL PROTECT

2003901 D

2003901 D

A	REVISED PER TDRR 22161 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 23234 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 23[illegible] DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
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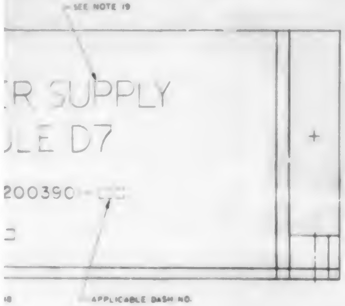
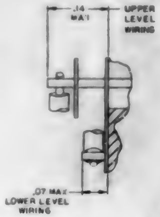
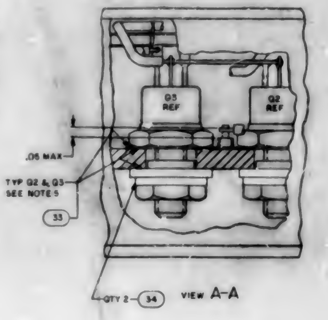




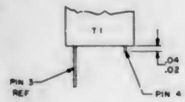
DETAIL A
SCALE 10/1



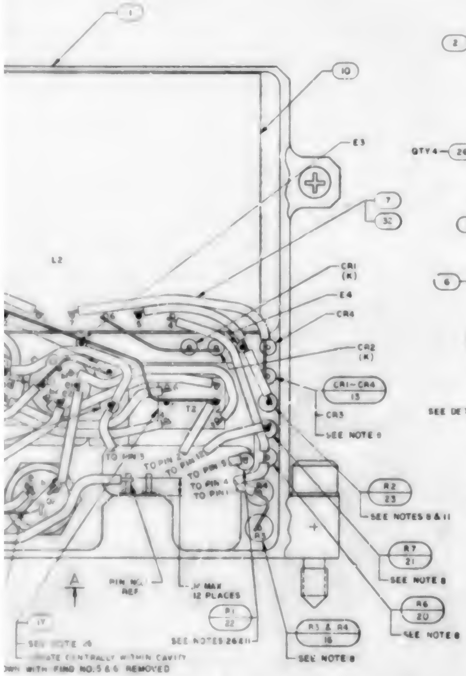
VIEW A-A

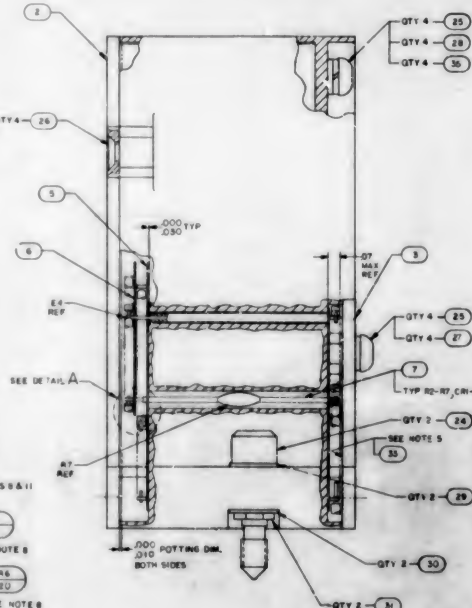
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
1006750-129	3750

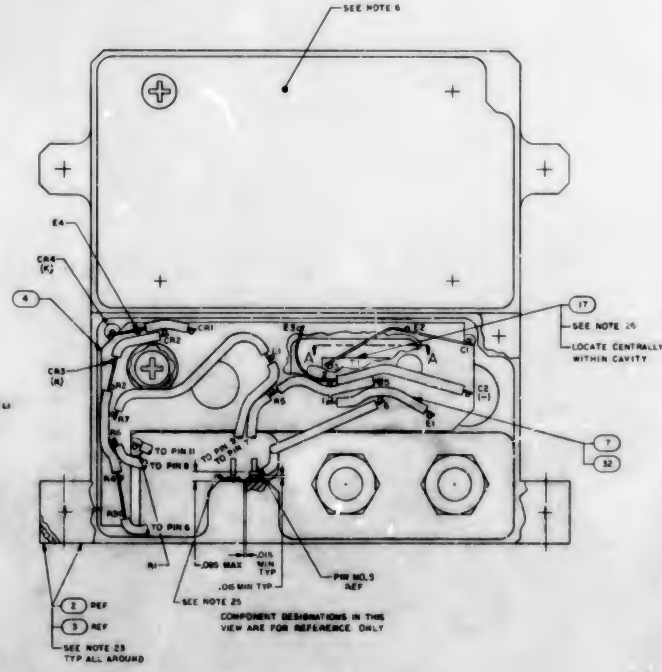
CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500



PARTIAL SECTION A-A







COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO. 2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO. 1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO. 9~~
25. SEAL INSULATORS TO FIND NO. 1 PER ND1002004 TYPE XI
26. STAKE FIND NO. 17 AND FIND NO. 22 TO FIND NO. 1 PER ND1002004 TYPE X

... N0.21 & E1 E4
...S DISASSEMBLED
...ED AT ELECTRICAL
...22 TO SELECTED

... WIRING
...DANCE WITH ND1002081
... & TEST UNIT NUMBER
...02122 TYPE III, CLASS 2
...02122, TYPE III, CLASS 2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
6	MS1[illegible]-8L3	WASHER, FLAT	35
2	MS15795-808	WASHER, FLAT	34
X	2005904	SCHEMATIC	REF
AR	1006879	SILICONE COMPOUND	33
AR	1006757-13	WIRE, ELECTRICAL, .020 DIA	32
2	MS16635-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
4	MS35338-78	WASHER, LOCK, SPLIT	28
4	NAS620C4	WASHER, FLAT	27
4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, JACKING	24
1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-72	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
1	1010291-4	TRANSFORMER, AUDIO	17
1	1010406-7	COIL, RF CHOKE	16
1	1006795-134	CAPACITOR, FIXED	15
1	1006793-19	CAPACITOR, FIXED	14
4	2004103-001	SEMICONDUCTOR DEVICE, DIODE	13
2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1006375	REACTOR, SATURABLE	10
[illegible]	[illegible]	[illegible]	9
[illegible]	[illegible]	[illegible]	8
AR	1006776-22	SLEEVING, INSULATION	7
1	2004902	INSULATOR, UPPER LEVEL	[illegible]
1	2004931-011	INSULATOR, LOWER LEVEL	[illegible]
1	2004934-	INSULATOR, REAR	[illegible]
1	2004906	COVER, BOTTOM	[illegible]
1	2004905	COVER, TOP	[illegible]
1	2003921-011	HEADER ASSEMBLY	[illegible]
011		LIST OF MATERIALS	

2003985	
2003900	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M.I.T. INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

80230 | J | 2003901

2003901 D

1.0 SCOPE

This specification establishes the detail requirements for identification and acceptance of the AGC DSKY Power Supply Module (D7) Part Numbers 2003901-021, and 2003901-031.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein.

2.1 EFFECTIVE ISSUES. Unless otherwise specified herein, Military and Government Standards and Specifications shall be the issue in effect on the date of request for proposal or invitation to bid.

SPECIFICATIONS

APOLLO G&N

ND 1002214	General Specification for Preservation, Packaging, Packing, and Container Marking of Apollo Guidance and Navigation Major Assemblies, Assemblies, Subassemblies, Parts and Associated Ground Support Equipment.

DRAWINGS

APOLLO G&N

2003901	POWER SUPPLY ASSEMBLY, MODULE D7 AGC DSKY

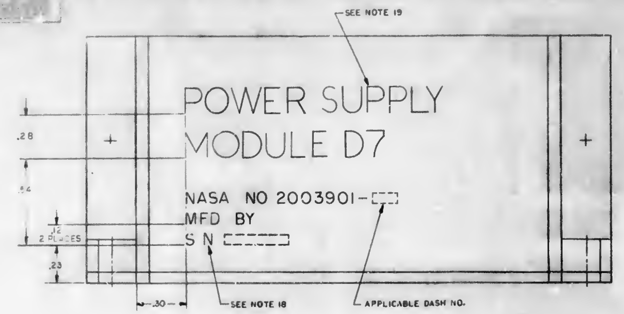
(Copies of Specifications, drawings, standards, bulletins, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

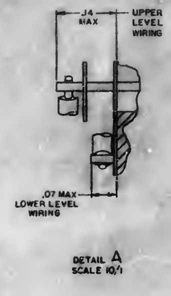
2.2 CONFLICTING REQUIREMENTS. In the event of conflict between the requirements of the contract, this specification, and the documents listed in this section, the following order of precedence shall apply and the contractor shall notify MIT APOLLO Management of the conflict as soon as it is determined.

a. The contract

b. This specification

c. Documents listed in this section





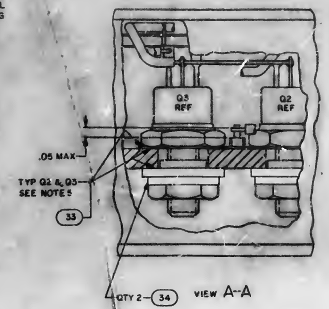
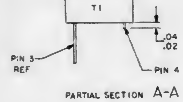
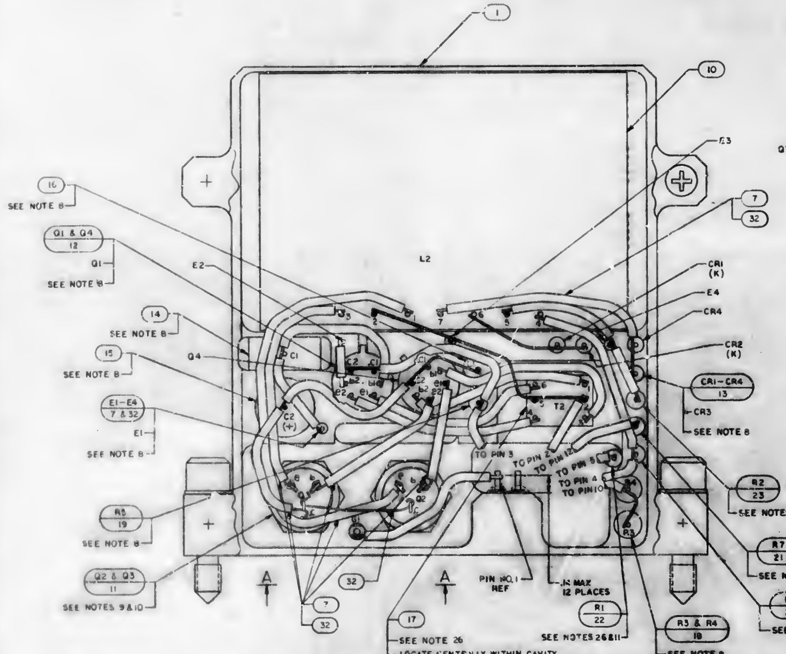


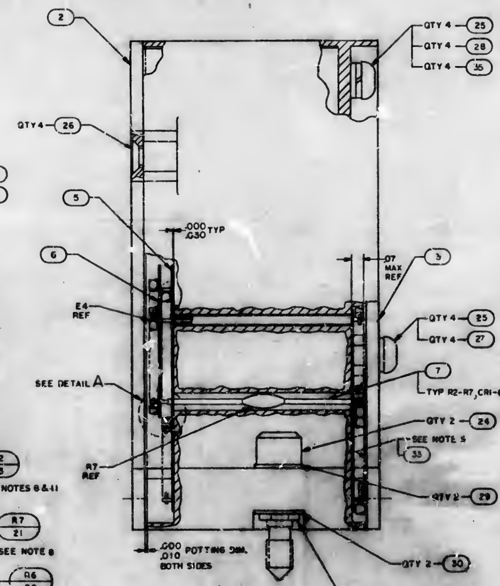
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
-129	3750
-130	4100
1006750-131	4500

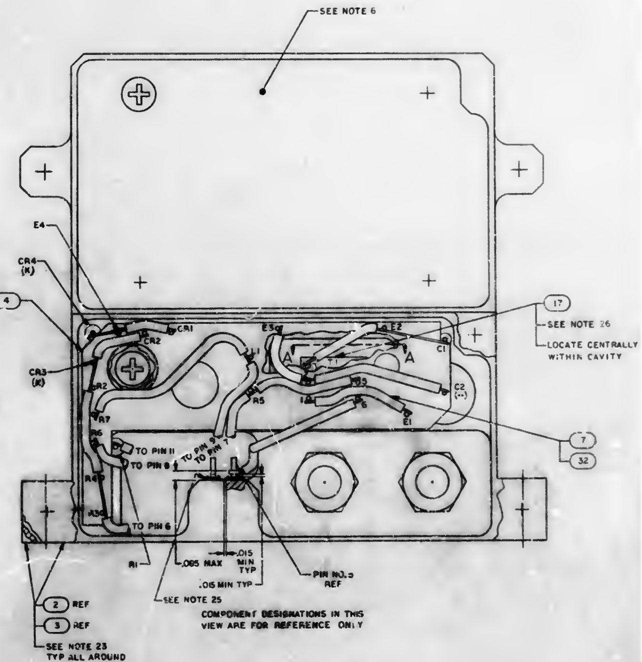
CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500





VIEW SHOWN WITH FIND NO.5 & 6 REMOVED





COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER 1002005
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002236
5. APPLY FIND NO.33 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VIEWS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.12 THRU FIND NO.16, FIND NO.18 THRU FIND NO.21, FIND NO.23 & E1-E4 TO FIND NO.1 PER ND1002009 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO.11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO.22 TO BE SELECTED FROM CHART A & FIND NO.23 TO SELECTED FROM CHART B
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002089
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.05 HIGH WHITE CHARACTERS PER ND1002018 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002022 USING INK 1006271-1
19. MARK .17/.15 HIGH WHITE CHARACTERS PER ND1002018 & ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.8~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE III
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002004 TYPE V

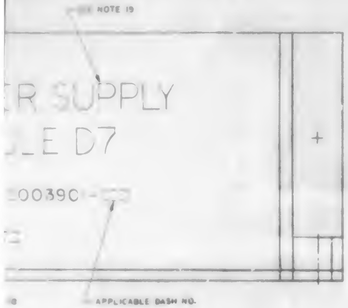
2003985	
2003900	
NEXT ASSY	USED ON
APPLICATION	

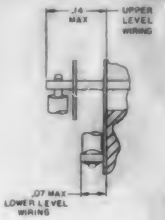
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS [illegible]
DO NOT SCALE THIS DRAWING
HEAT TREATMENT [illegible]

2003901 E

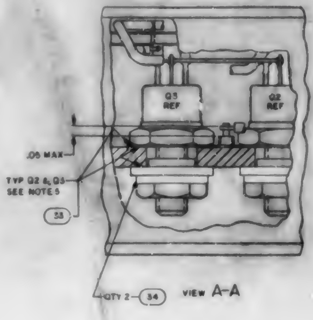
2003901 E [illegible]

REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 22[illegible] DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 23234 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 23628 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 24332 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
E	REVISED PER TDRR 2514[illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]





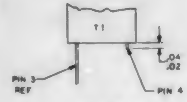
DETAIL A
SCALE 10/1



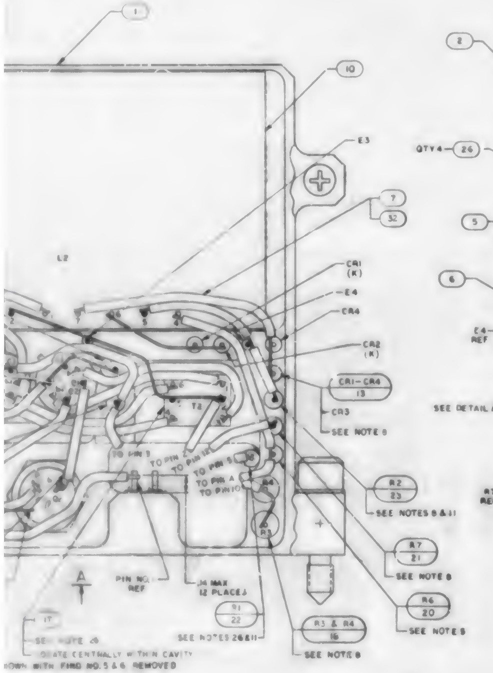
VIEW A-A

CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2250
-127	3150
-128	3450
-129	3750
-130	4100
1006750-131	4500

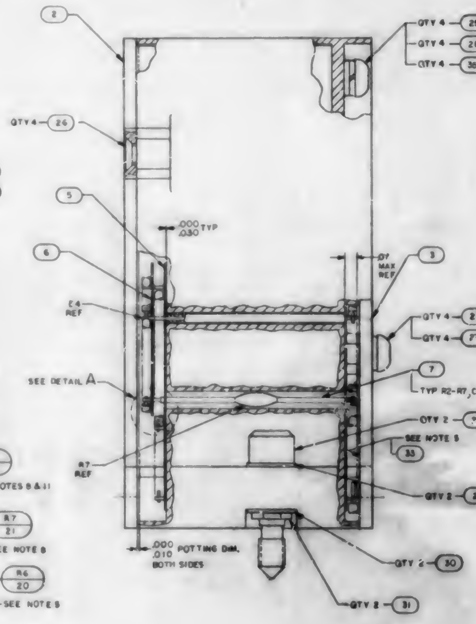
CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500

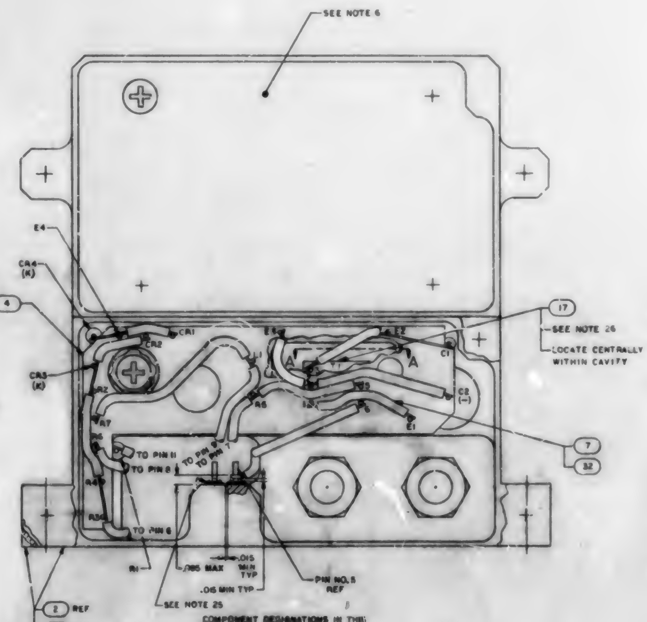


PARTIAL SECTION A-A



...OWN WITH FIND NO. 5 & 6 REMOVED





COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

...NC NO. 23 & E1-E4
... IS DISASSEMBLED
...ED AT ELECTRICAL
...NO. 23 TO SELECTED

... WIRING
...DANCE WITH ND1002[illegible]
...N WITH [illegible] NUMBER
...002102, TYPE II, CLASS 2
...002113, TYPE II, CLASS 2

20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. − DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO. 2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO. 1
~~24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO. 8~~
25. SEAL INSULATORS OF FIND NO. 1 PER ND1002004 TYPE XI
26. STAKE FIND NO. 17 AND FIND NO. 22 TO FIND NO. 1 PER ND1002004 TYPE X

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
4	MS15795-803	WASHER, FLAT	35
2	MS15795-808	WASHER, FLAT	34
X	2005904	SCHEMATIC	REF
AR	1006879	SILICONE COMPOUND	33
AR	1006757-13	WIRE, ELECTRICAL .020 DIA	32
2	MS16633-4015	RING, RETAINING, EXTERNAL	31
2	1004546-3	WASHER, FLAT	30
2	1004546-1	WASHER, FLAT	29
4	MS35338-78	WASHER, LOCK, SPLIT	28
4	NAS620C4	WASHER, FLAT	27
6	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	1004579-1	SCREW, JACKING	24
1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1006750-56	RESISTOR, FIXED	21
1	1006750-72	RESISTOR, FIXED	20
1	1006750-32	RESISTOR, FIXED	19
2	1006760-64	RESISTOR, FIXED	18
2	1010291-4	TRANSFORMER, AUDIO	17
1	1010406-7	COIL, RF CHOKE	16
1	1006796-134	CAPACITOR, FIXED	15
1	1006793-19	CAPACITOR, FIXED	14
4	2004103-001	SEMICONDUCTOR DEVICE, DIODE	13
2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1006325	REACTOR, SATURABLE	10
AR	[illegible]	[illegible]	9
AR	[illegible]	[illegible]	8
AR	1006776-27	SLEEVING, INSULATION	7
1	2004902	INSULATOR, UPPER LEVEL	6
1	2004901-011	INSULATOR, LOWER LEVEL	5
1	[illegible]	INSULATOR, REAR	4
1	[illegible]	COVER, BOTTOM	3
1	[illegible]	COVER, TOP	2
1	[illegible]-05	HEADER ASSEMBLY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003906	
2003907	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

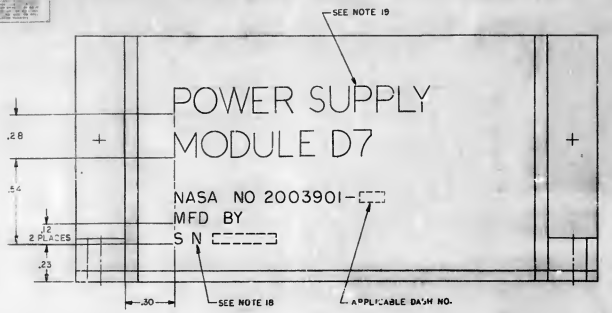
CODE IDENT NO.	SIZE	DWG NO.
80230	J	2003901

POWER SUPPLY MODULE D7

NASA NO 2003901-[ ]

MFD BY

S N [ ]



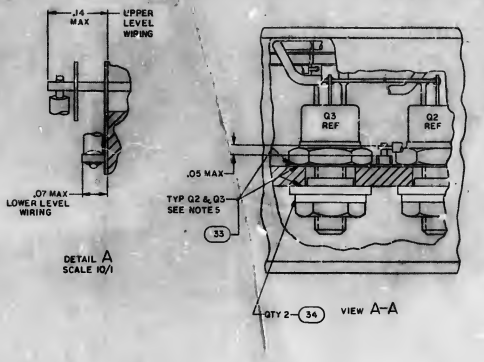
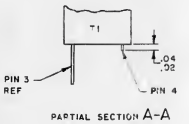


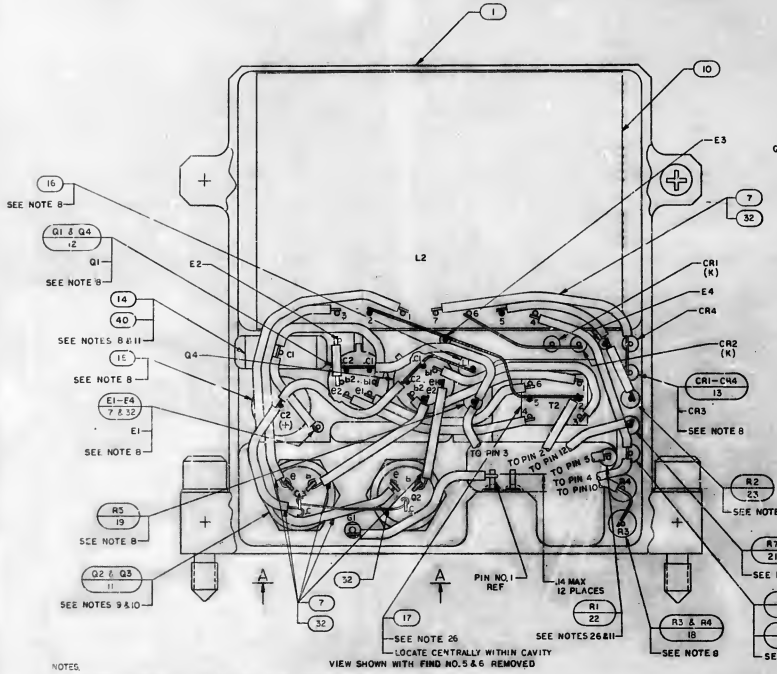
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2710
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
-129	3750
-130	4100
-131	4500
-38	1800
-39	2000
-40	2200
-122	1900
-123	2100
-124	2300
1006750125	2550

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-311	910
-32	1000
-34	1200
1006750-36	1500

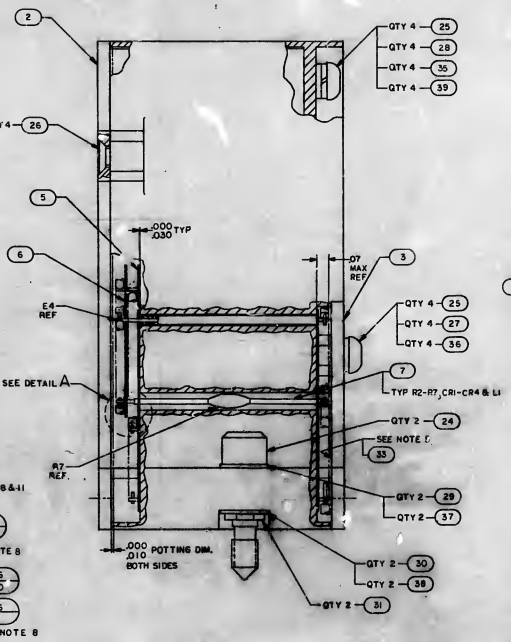
CHART C	
1006793-18	3000 PF
-19	3300
-20	3600
-21	3900
-22	4300
-23	4700
1006793-24	5100 PF

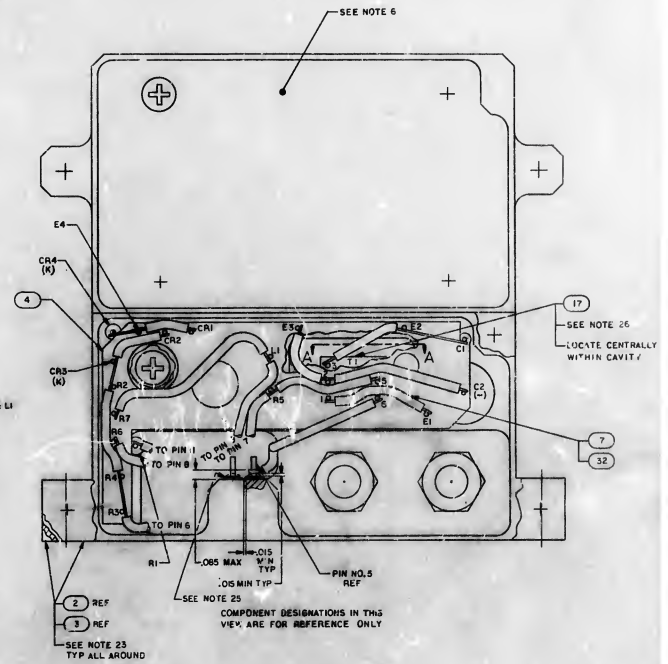


PARTIAL SECTION A-A



VIEW SHOWN WITH FIND NO.5 & 6 REMOVED



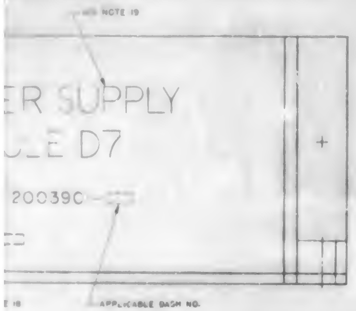


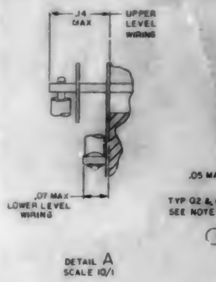
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ICC2073
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002256
5. APPLY FIND NO.33 TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL VS. S SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.2 THRU FIND NO.15, FIND NO.18 THRU FIND NO.21, FIND NO.23, FIND NO. 41 & E-E4 TO FIND NO. PER ND1002005 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO.11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST, FIND NO.22 TO BE SELECTED FROM CHART A, FIND NO.23 TO BE SELECTED FROM CHART B & FIND NO.40 TO BE SELECTED FROM CHART C
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRES SHALL BE IN ACCORDANCE WITH ND1002080
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK D7/08 HIGH WHITE CHARACTERS PER ND1002080 & ND1002122, TYPE II, CLASS 2 & SERIALIZE PER ND1002023 USING INK 1006271-1
19. MARK D7/05 HIGH WHITE CHARACTERS PER ND1002080 & ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. - DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE XII
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002004 TYPE X

		UNLESS OTHERWISE DIMENSIONS ARE IN ± DECIMALS ON FRACTIONS DECIMALS ±
		DO NOT SCALE THIS MATERIAL
2003950		
2003985		HEAT TREATMENT
2003900		
NEXT ASSY	USED ON	FINISH
APPLICATION		





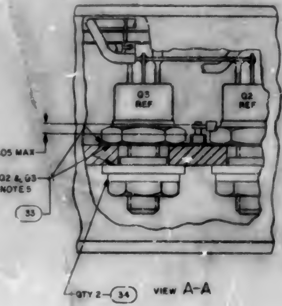


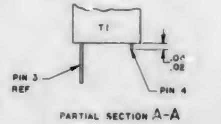
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4750
-126	2850
-127	[illegible]
-128	[illegible]
-129	3750
-130	4100
-131	4500
-38	1800
-39	2000
-40	2200
-122	1900
-123	2100
-124	2300
1006750-125	2550

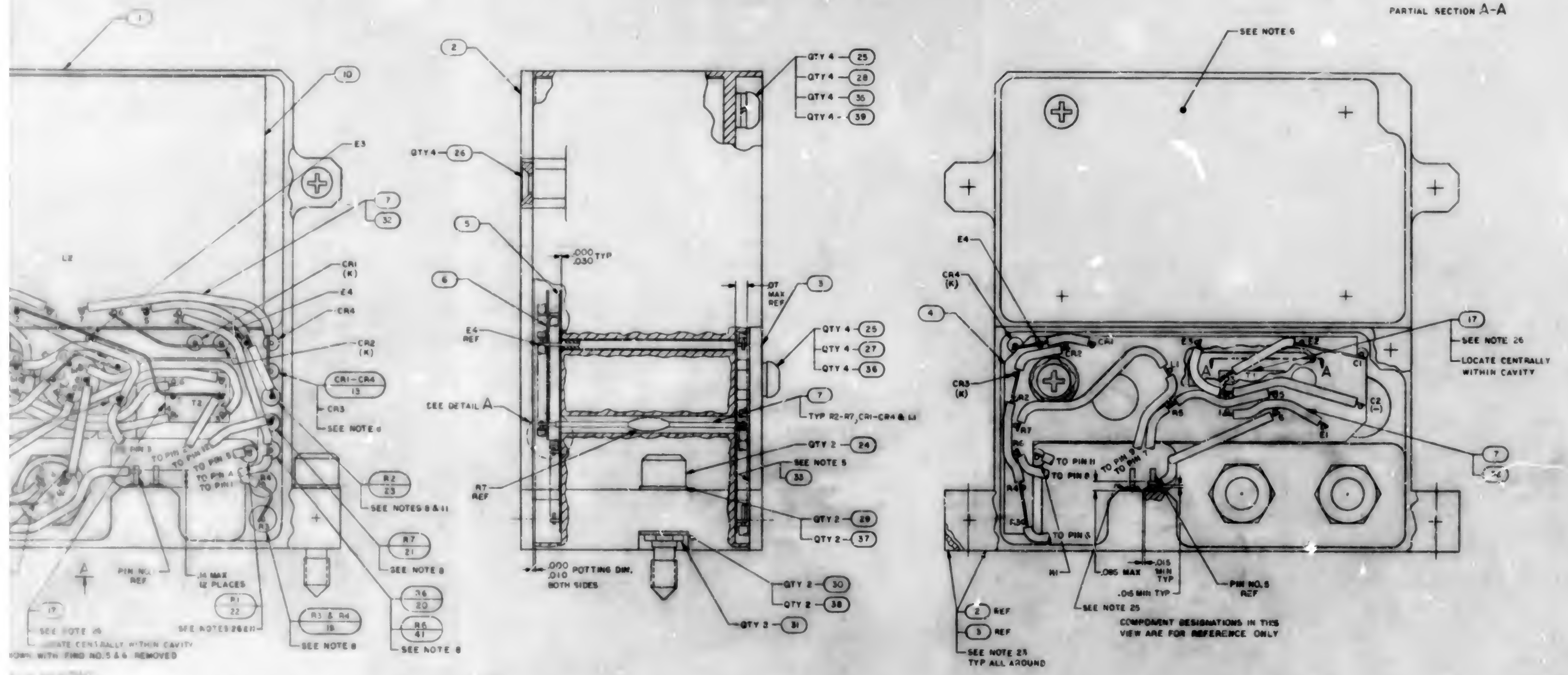
CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-33	1000
-34	1200
1006750-36	1500

CHART C	
PART NO.	VALUE
1006793-18	3000 PF
-19	3300
-20	3600
-21	3900
-22	4300
-23	4700
1006793-24	5100 PF

2003901 F

REV	REVISIONS		
A	REVISED PER TDRR 22161 DR CHK APPD		
B	REVISED PER TDRR 23234 DR CHK APPD		
C	REVISED PER TDRR 23[illegible] DR CHK APPD		
D	REVISED PER TDRR 24232 DR CHK APPD		
E	REVISED PER TDRR 25147 DR CHK		
F	REVISED PER TDRR 2755 DR CHK APPD		





20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. – DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. [illegible]
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
~~24. UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9~~
25. SEAL INSULATORS OF FIND NO.1 PER ND1002004 TYPE III
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002004 TYPE X

QTY	QTY	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	–	2005921	SCHEMATIC	REF
–	X	2005904	SCHEMATIC	REF
1	–	1006750-63	RESISTOR, FIXED	41
1	–	SEE NOTE 11	CAPACITOR, FIXED	40
4	–	2004984-013	WASHER, FLAT	39
1	–	2004984-003	WASHER, FLAT	38
2	–	2004984-001	WASHER, FLAT	37
4	–	2004984-012	WASHER, FLAT	36
–	4	MS15795-803	WASHER, FLAT	35
2	2	MS15795-808	WASHER, FLAT	34
AR	AR	[illegible]	SILICONE COMPOUND	33
AR	AR	1006757-13	WIRE, ELECTRICAL .020 DIA	32
2	2	MS16633-4015	RING, RETAINING, EXTERNAL	31
–	2	1004546-3	WASHER, FLAT	30
–	2	1004546-1	WASHER, FLAT	29
4	4	MS35338-78	WASHER, LOCK, SPLIT	28
–	4	NAS620C4	WASHER, FLAT	27
4	4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	2	1004579-1	SCREW, JACKING	24
1	1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1	1006750-56	RESISTOR, FIXED	21
–	1	1006750-72	RESISTOR, FIXED	20
1	1	1006750-32	RESISTOR, FIXED	19
2	2	1006760-54	RESISTOR, FIXED	18
2	2	1010291-4	TRANSFORMER, AUDIO	17
1	1	1010406-7	COIL, RF CHOKE	16
1	1	1006796-134	CAPACITOR, FIXED	15
–	1	1006793-15	CAPACITOR, FIXED	14
4	4	2004105-001	SEMICONDUCTOR DEVICE, DIODE	13
2	2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1	1006328	REACTOR, SATURABLE	10
[illegible]	[illegible]	[illegible]	[illegible]	9
[illegible]	[illegible]	[illegible]	[illegible]	8
AR	AR	1006776-22	SLEEVING, INSULATION	7
1	1	2004912	INSULATOR, UPPER LEVEL	6
1	1	2004901-011	INSULATOR, LOWER LEVEL	5
1	1	2004934-	INSULATOR, HEAD	4
1	1	2004906	COVER, BOTTOM	3
1	1	2004906	COVER, TOP	2
1	1	[illegible]-011	HEADER ASSEMBLY	1
021	011		LIST OF MATERIALS	

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

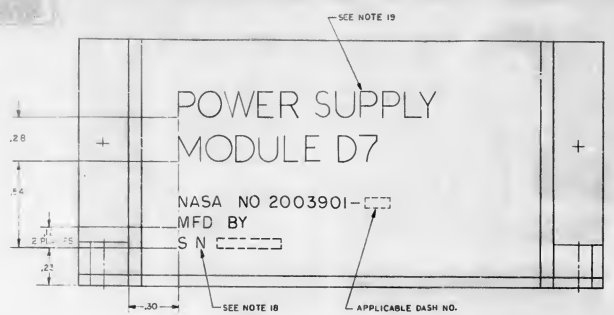
POWER SUPPLY ASSEMBLY
MODULE D7
AGC DSKY

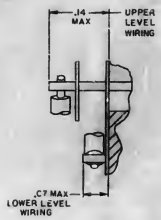
80230 J 2003901

2003950
2003888
2003908

2003901 F

F 2/2





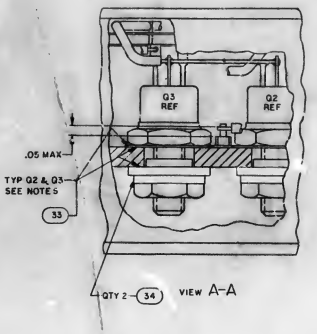
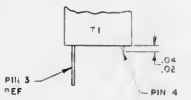


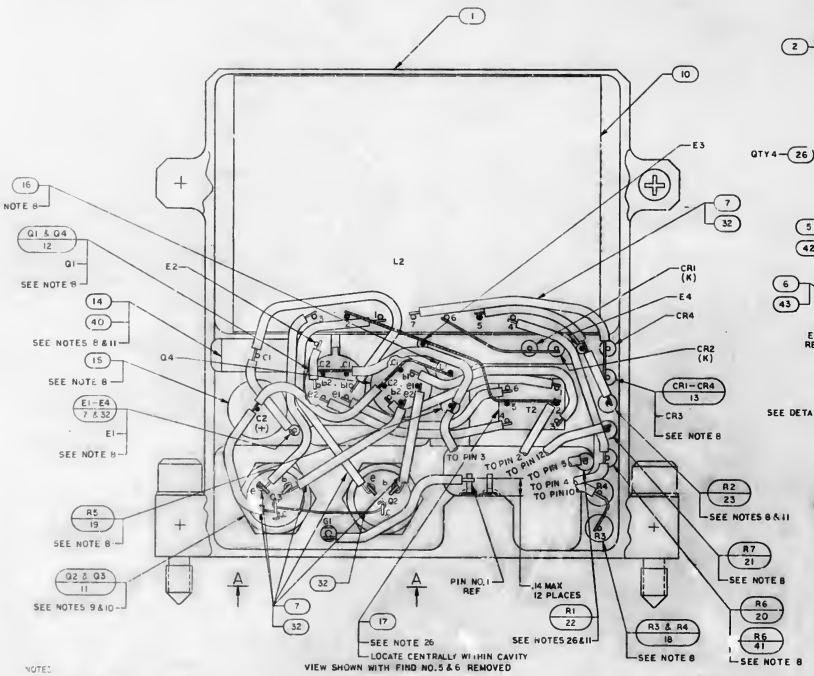
CHART A	
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
-129	3750
-130	4100
-131	4500
-38	1800
-39	2000
-40	2200
-122	1900
-123	2100
-124	2300
1006750-125	2550

CHART B	
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1000
-34	1200
1006750-36	1500

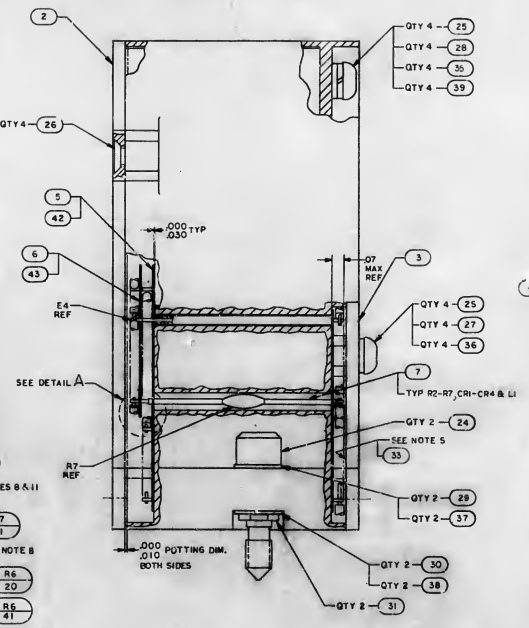
CHART C	
PART NO.	VALUE
1006793-18	3000 PF
-19	3300
-20	3600
-21	3900
-22	4300
-23	4700
1006793-24	5100 PF

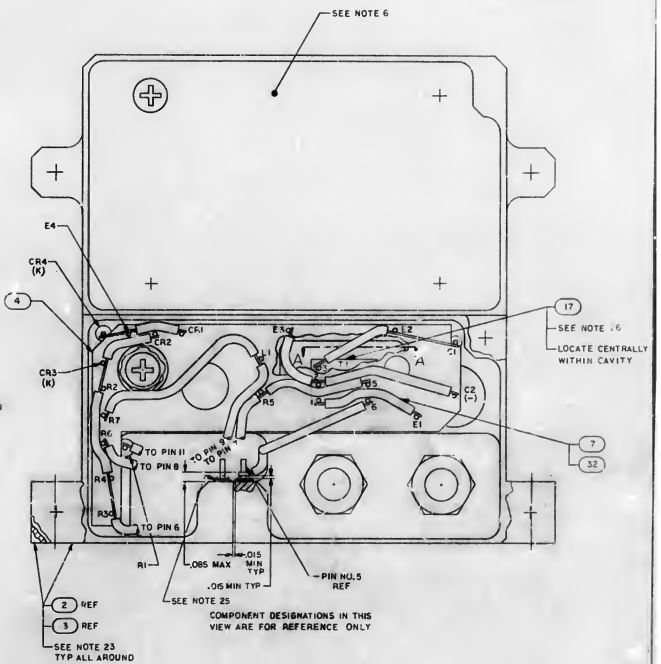


PARTIAL SECTION A-A



VIEW SHOWN WITH FIND NO.5 & 6 REMOVED





COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

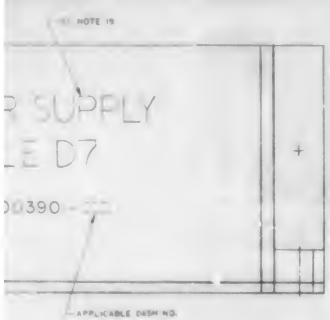
NOTE:

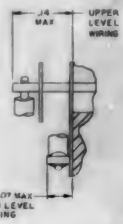
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER
3. SOLDER PER ND1002071 USING SOLDER PER ND1002075
4. ENCAPSULATE PER ND1002036
5. APPLY FINGERNAIL TO INDICATED AREA
6. INDICATED AREA TO BE FREE OF ENCAPSULATING COMPOUND
7. ALL LEADS SHOWN WITH POTTING REMOVED FOR CLARITY
8. STAKE FIND NO.2 THRU FIND NO.18 THRU FIND NO.21, FIND NO.23, FIND NO. 40, FIND NO.41 & E1-E4 TO FIND NO.1 PER ND1002005 METHOD C OR D
9. NEW MICA WASHER TO BE INSTALLED EACH TIME FIND NO. 11 IS DISASSEMBLED
10. MOUNTING TORQUE FOR FIND NO.11 TO BE 8-15 INCH POUNDS
11. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. FIND NO.22 TO BE SELECTED FROM CHART A, FIND NO.23 TO BE SELECTED FROM CHART B & FIND NO. 40 TO BE SELECTED FROM CHART C
12. AR DENOTES AS REQUIRED
13. K DENOTES CATHODE SIDE OF DIODE
14. WHITE DOT & CLEAR LEAD INDICATES LOWER LEVEL WIRING
15. BLACK DOT & CROSS HATCHED LEAD INDICATES UPPER LEVEL WIRING
16. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
17. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH
18. MARK .07/.05 HIGH WHITE CHARACTERS PER ND1002028 & ND1002122, TYPE II, CLASS 2 & SPIRALIZE PER ND1002083 USING INK 1006271-1
19. MARK .11/.15 HIGH WHITE CHARACTERS PER ND1002028 & ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. - DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF A.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.9~~
25. SEAL INSULATORS OF FIND NO.1 P.R ND.002004 TYPE XI
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002034 TYPE X

			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN TOLERANCES ON FRACTIONS DECIMALS ANGLES
			DO NOT SCALE THIS DRAWING
2003950			MATERIAL
2003985			HEAT TREATMENT
2003900			
NEXT ASSY	USED ON		FINISH
APPLICATION			

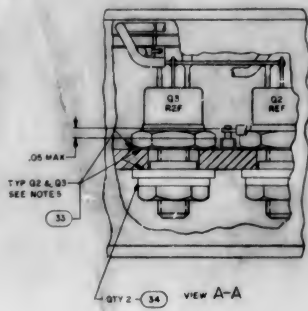
2003901 G

A	REVISED PER TDRR 22161 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 23234 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR [illegible] DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 24232 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
E	REVISED PER TDRR [illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
F	REVISED PER TDRR 27551 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 28032 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]





DETAIL A
SCALE 10/1



VIEW A-A

CHART A

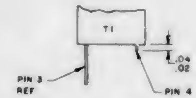
PART NO.	VALUE
1006750-41	2400
-42	2700
-43	3000
-44	3300
-45	3600
-46	3900
-47	4300
-48	4700
-126	2850
-127	3150
-128	3450
-129	3750
-130	4100
-131	4500
-38	1800
-39	2000
-40	2200
-122	1900
-123	2100
-124	2300
1006750-125	2550

CHART B

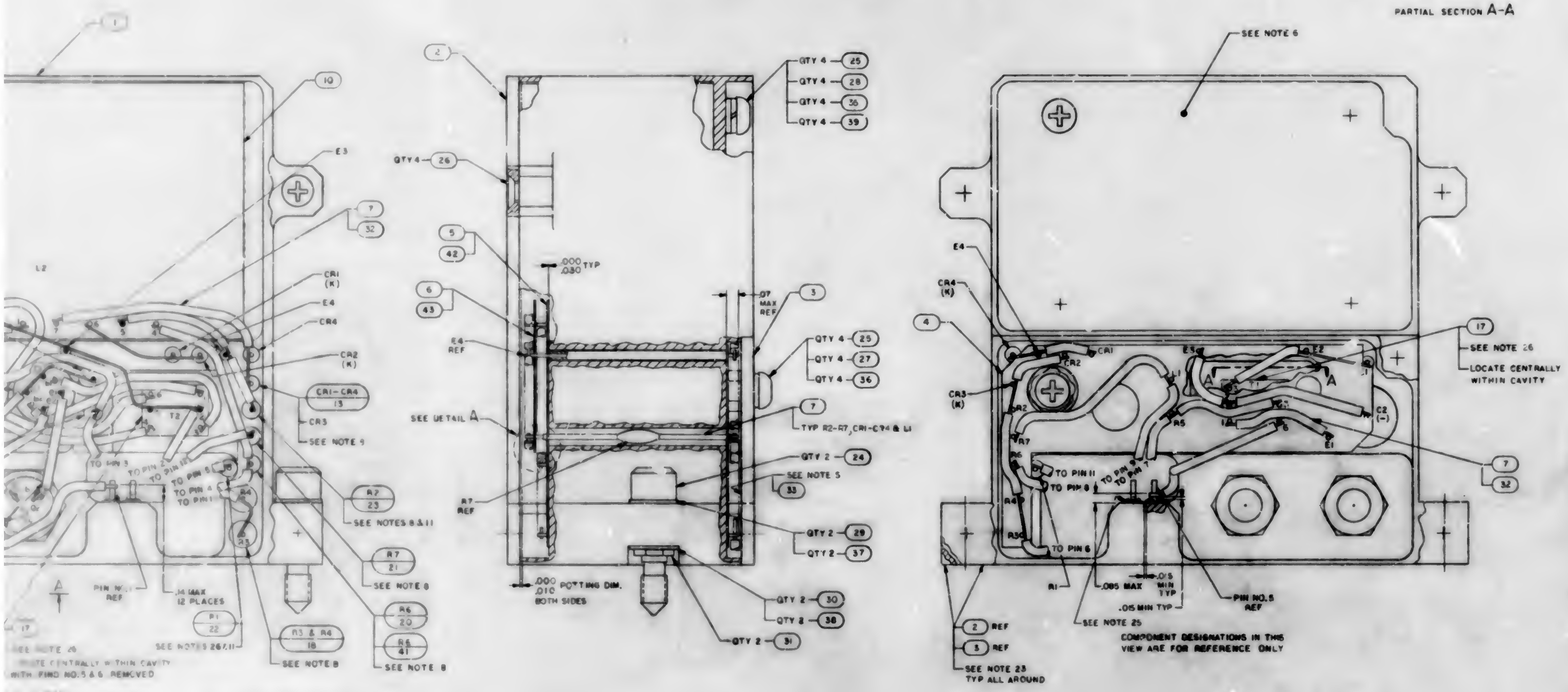
PART NO.	VALUE
1006750-19	300
-22	390
-25	510
-27	620
-28	680
-29	750
-30	820
-31	910
-33	1000
-34	1200
1006750-36	1500

CHART C

PART NO.	VALUE
1006793-18	3000 PF
-19	3300
-20	3600
-21	3900
-22	4300
-23	4700
1006793-24	5100 PF



PARTIAL SECTION A-A



20. + DENOTES POSITIVE SIDE OF CAPACITOR
21. – DENOTES NEGATIVE SIDE OF CAPACITOR
22. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF P.S. 2003901
23. FIND NO.2 AND 3 SHALL NOT OVERHANG EDGES OF FIND NO.1
24. ~~UNLESS OTHERWISE SPECIFIED ALL WIRING TO BE FIND NO.8~~
25. SEAL INSULATORS OF FIND NO. [illegible] PER ND1002004 TYPE VI
26. STAKE FIND NO.17 AND FIND NO.22 TO FIND NO.1 PER ND1002004 TYPE V

QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
–	X	2005904	SCHEMATIC	REF
X	–	2005921	SCHEMATIC	REF
1	–	2004715	INSULATOR, UPPER LEVEL	43
1	–	2004714	INSULATOR, LOWER LEVEL	42
1	–	1006750-63	RESISTOR, FIXED	41
1	–	SEE NOTE 11	CAPACITOR, FIXED	40
4	–	2004984-013	WASHER, FLAT	39
2	–	2004984-003	WASHER, FLAT	38
2	–	2004984-001	WASHER, FLAT	37
4	–	2004984-012	WASHER, FLAT	36
–	4	MS15795-[illegible]	WASHER, FLAT	35
2	2	MS15795-808	WASHER, FLAT	34
AR	AR	1006879	SILICONE COMPOUND	33
AR	AR	1006757-13	WIRE, ELECTRICAL .020 DIA	32
2	2	MS16633-4015	RING, RETAINING, EXTERNAL	31
–	2	1004546-3	WASHER, FLAT	30
–	2	1004545-1	WASHER, FLAT	29
4	4	MS35338-78	WASHER, LOCK, SPLIT	28
–	4	NAS620C4	WASHER, FLAT	27
4	4	MS24693-PC2	SCREW, FLAT HD, CROSS RECESSED	26
8	8	MS35216-12	SCREW, PAN HD, CROSS RECESSED	25
2	2	1004575-1	SCREW, JACKING	24
1	1	SEE NOTE 11	RESISTOR, FIXED FILM	23
1	1	SEE NOTE 11	RESISTOR, FIXED FILM	22
1	1	1006750-56	RESISTOR, FIXED	21
–	1	1006750-72	RESISTOR, FIXED	20
1	1	1006750-32	RESISTOR, FIXED	19
2	2	1006760-64	RESISTOR, FIXED	18
2	2	1010291-4	TRANSFORMER, AUDIO	17
1	1	1010406-7	COIL, RF, CHOKE	16
1	1	1006755-134	CAPACITOR, FIXED	15
–	1	1006793-18	CAPACITOR, FIXED	14
4	4	2004103-001	SEMICONDUCTOR DEVICE, DIODE	13
2	2	1010376-1	TRANSISTOR, SILICON, TYPE NPN	12
2	2	1006363-002	TRANSISTOR, SILICON, TYPE NPN	11
1	1	1006325	REACTOR, SATURABLE	10
[illegible]	[illegible]	[illegible]	[illegible]	9
[illegible]	[illegible]	[illegible]	[illegible]	8
AR	AR	1005776-22	SLEEVING, INSULATION	7
–	1	2004902	INSULATOR, UPPER LEVEL	6
–	1	2004901-011	INSULATOR, LOWER LEVEL	5
1	1	2004934-	INSULATOR, REAR	4
1	1	2004906	COVER, BOTTOM	3
1	1	2004905	COVER, TOP	2
1	1	2003921-011	HEADER ASSEMBLY	1
021	011	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING

2003950
2003905
2003900

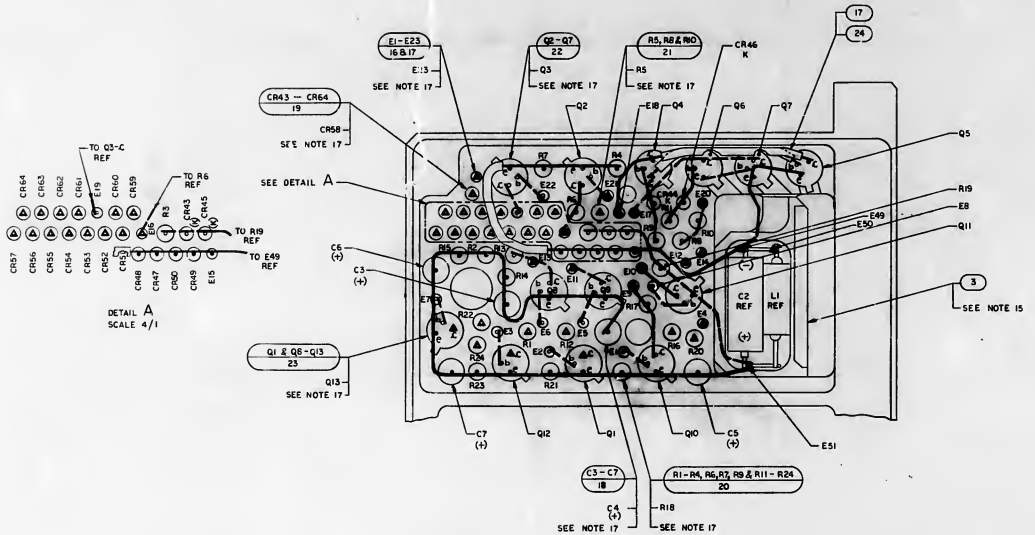
M I T INSTRUMENTATION LAB.
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

POWER SUPPLY ASSEMBLY MODULE AGC DSKY

80230 J 2003901

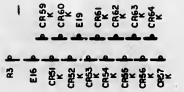
2003901 G

F-2/2

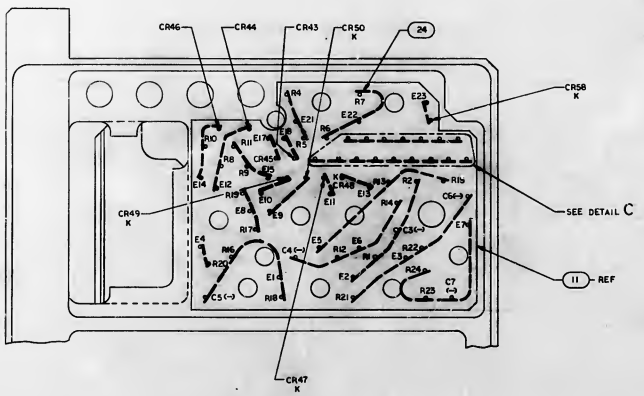


VIEW A-A
SCALE 4/1
VIEW SHOWN WITH FIND NO. 4, 12, 13, 14 AND SPECIAL LEVEL WIRING REMOVED

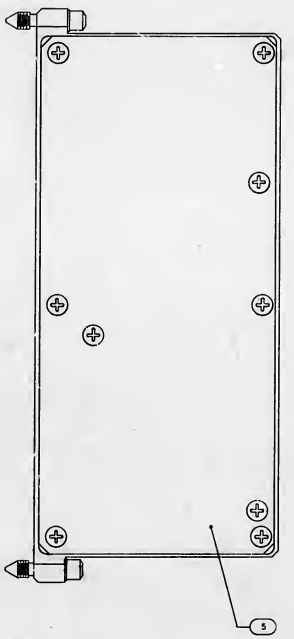
DETAIL A
SCALE 4/1



DETAIL C
SCALE 4/1



VIEW B-B
SCALE 4/1
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY



WIRING LEGEND

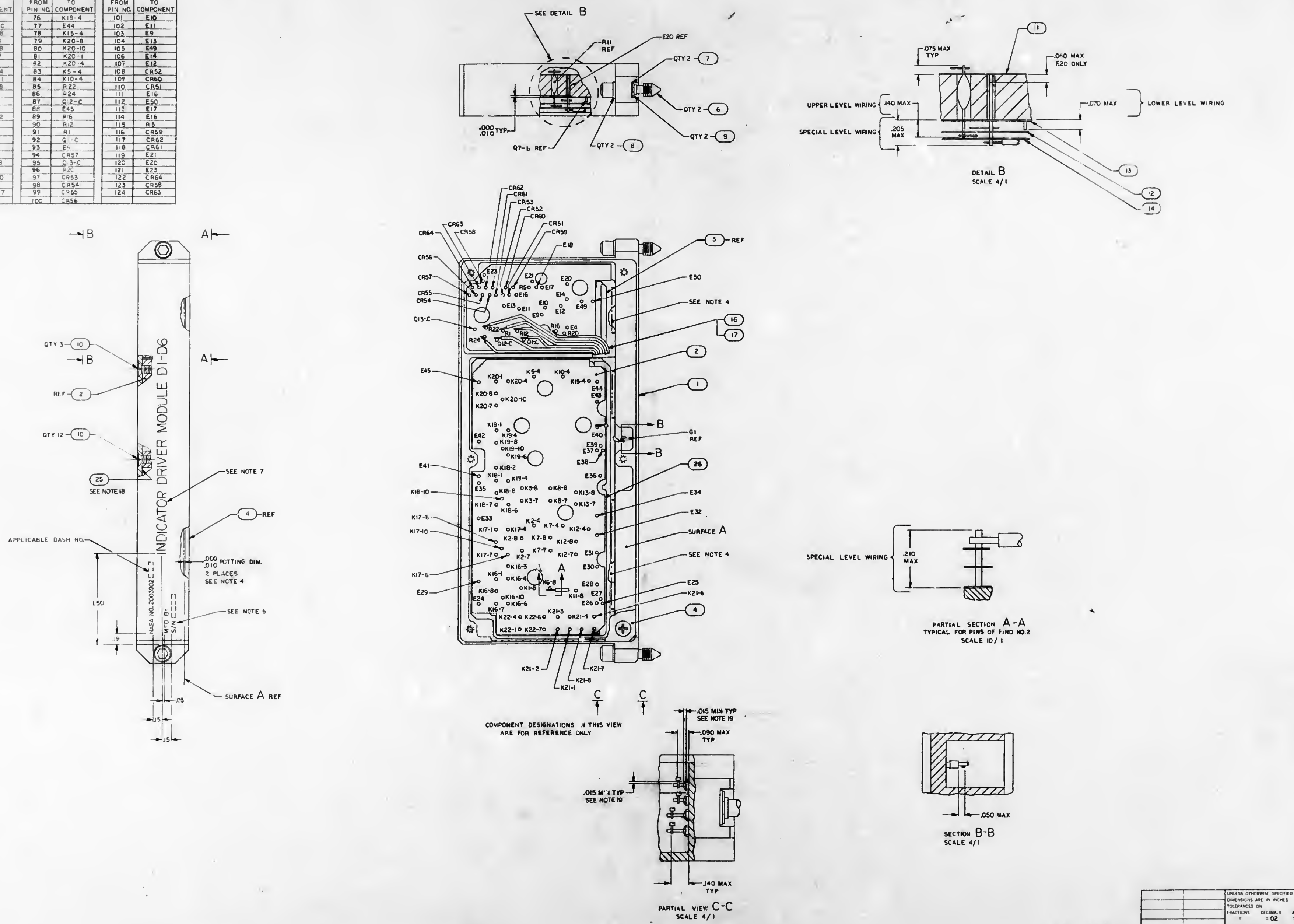
FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT
1	K21-7	26	E29	51	E34	76	K19-4
2	K21-2	27	K16-3	52	K18-10	77	E44
3	K22-7	28	K16-1	53	K13-8	78	K15-4
4	K22-1	29	K12-7	54	K8-8	79	K20-8
5	K22-6	30	K7-7	55	K3-8	80	K20-10
6	K22-4	31	K2-6	56	K3-7	81	K20-1
7	K21-1	32	E26	57	E35	82	K20-4
8	K21-8	33	K17-10	58	K18-4	83	K5-4
9	E24	34	K12-8	59	K18-1	84	K10-4
10	K21-3	35	E31	60	K18-8	85	R22
11	K21-4	36	K7-7	61	E37	86	R24
12	K21-6	37	K17-4	62	E36	87	Q12-C
13	E27	38	K17-8	63	K19-6	88	E45
14	E25	39	K2-8	64	K18-2	89	R16
15	K16-7	40	K7-8	65	E40	90	R12
16	E25	41	K2-4	66	E39	91	R1
17	K11-8	42	K7-4	67	E38	92	Q1-C
18	K16-8	43	K12-4	68	Q1	93	E6
19	K16-10	44	E32	69	E42	94	CR57
20	K16-6	45	K18-6	70	K19-8	95	Q13-C
21	K16-4	46	K18-7	71	E41	96	R20
22	K1-8	47	E33	72	K19-10	97	CR53
23	E28	48	K17-1	73	E43	98	CR54
24	K6-8	49	K8-7	74	K20-7	99	CR55
25	K17-7	50	K13-7	75	K19-1	100	CR56

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. ENCAPSULATE PER ND1052236
5. ▼ DENOTES CATHODE SIDE OF DIODE
6. MARK .05/.07 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122 TYPE II, CLASS 2 & SERIALIZE PER ND1002023 USING INK 1006271-1
7. MARK .18/.20 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122 TYPE II, CLASS 2 USING INK 1006271-1
8. AR DENOTES AS REQUIRED
9. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
10. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
11. ▲ AND CLEAR LEADS INDICATE SPECIAL LEVEL WIRING
12. — DENOTES NEGATIVE SIDE OF CAPACITOR
13. + DENOTES POSITIVE SIDE OF CAPACITOR
14. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
15. BOND FIND NO.3 TO FIND NO.1 PER ND1002004 TYPE IV
16. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH & SHALL MEET ALL THE REQUIREMENTS OF P.S. 2003902
17. STAKE FIND NO.17 THRU FIND NO.23 TO FIND NO.1 PER ND1002009 METHOD C OR D
18. APPLY FIND NO.25 TO INDICATED SURFACE
19. SEAL INSULATORS ON FIND NO.1 PER ND1002004 TYPE VI

2003902 | B

WIRING LEGEND

FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT
51	E34	76	K19-4	101	E10
52	K18-10	77	E44	102	E11
53	K13-8	78	K15-4	103	E9
54	K8-8	79	K20-8	104	E13
55	K3-8	80	K20-10	105	E49
56	K3-7	81	K20-1	106	E14
57	E35	82	K20-4	107	E12
58	K18-4	83	K5-4	108	CR52
59	K18-1	84	K10-4	109	CR60
60	K18-8	85	R22	110	CR51
61	E37	86	R24	111	E16
62	E36	87	Q12-C	112	E50
63	K19-6	88	E45	113	E17
64	K18-2	89	R16	114	E18
65	E40	90	R12	115	R5
66	E39	91	R1	116	CR59
67	E38	92	Q[illegible]-C	117	CR62
68	[illegible]	93	E4	118	CR61
69	E42	94	CR57	119	E21
70	K19-8	95	Q13-C	120	E20
71	E41	96	R20	121	E23
72	K19-10	97	CR53	122	CR64
73	E43	98	CR54	123	CR58
74	K10-7	99	CR55	124	CR63
75	K15-1	100	CR56		



QTY REQD	PART OR IDENTIFYING NO
	2005902
1	2004917
AR	1006879
AR	1006757-1
7	2004004-002
6	2004004-001
3	1006750-62
21	[illegible]-56
22	[illegible]-001
5	1006755-106
AR	[illegible]-22
AR	[illegible]-9
1	2004915
1	2004914-011
1	2004913
1	2004912-011
5	MS24693-C2
2	MS16633-4015
2	1004546-1
2	1004546-3
2	1004579-1
1	2004956
1	2004911
1	2003909-011
1	2003910-011
1	2003907-011
011	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

NEXT ASSY	USED ON
2003985	
2003900	

APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

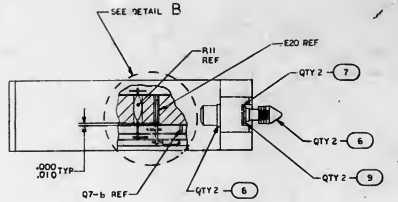
DRAWN / CHECKED / APPROVAL / APPROVAL / NASA APPROVAL / MIT APPROVAL

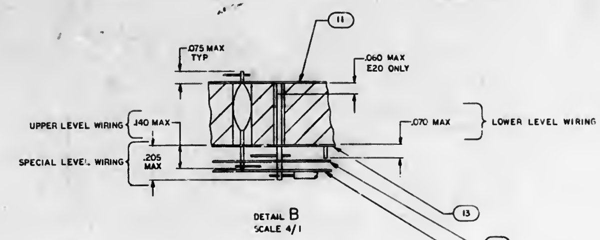
2003902 B

FROM PIN NO.	TO COMPONENT
101	E10
102	E11
103	E9
104	E13
105	E49
106	E14
107	E12
108	CR52
109	CR60
110	CR51
[illegible]	E16
112	E50
113	E17
114	E18
115	R5
116	CR59
117	CR62
118	CR61
119	E2
120	E20
121	E23
122	CR64
123	CR58
124	CR63

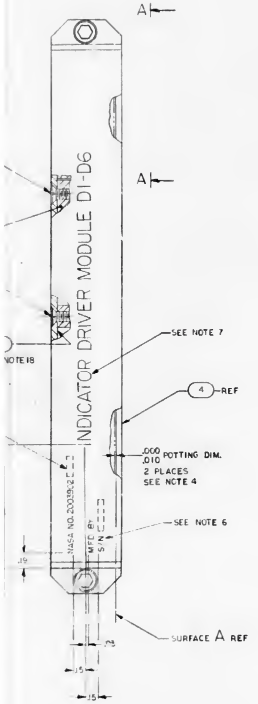
2003902 B

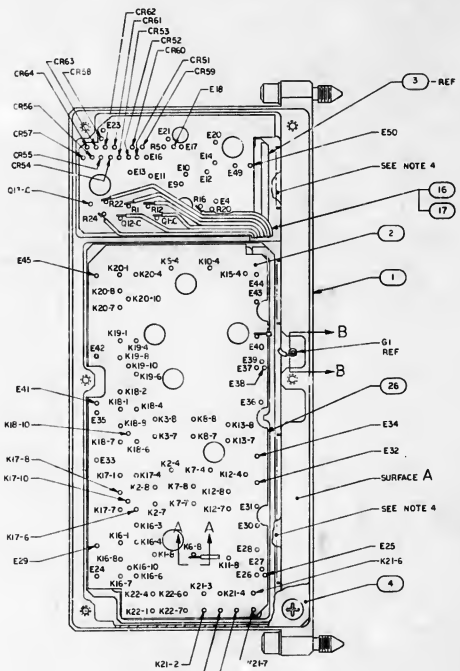
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22162		
B	REVISED PER TDRR 24232		



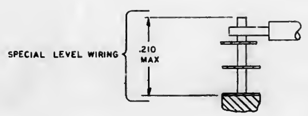


DETAIL B
SCALE 4/1

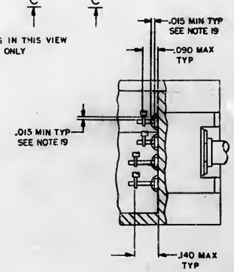




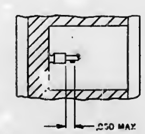
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY



PARTIAL SECTION A-A
TYPICAL FOR PINS OF FIND NO. 2
SCALE 10/1



PARTIAL VIEW C-C
SCALE 4/1



SECTION B-B
SCALE 4/1

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
	2005902	SCHEMATIC	REF
1	2004917	INSULATOR	26
AR	1006879	COMPOUND, SILICONE THERMOCONDUCTIVE	25
AR	1006757-1	WIRE, ELECTRICAL .010 x .020	24
7	2004004-002	TRANSISTOR	23
6	2004004-001	TRANSISTOR	22
3	1006750-62	RESISTOR, FIXED FILM	21
21	1006750-56	RESISTOR, FIXED FILM	20
22	2004103-001	SEMICONDUCTOR DEVICE, DIODE	19
5	1006755-106	CAPACITOR, FIXED	18
AR	1006776-22	SLEEVING, INSULATION	17
AR	1006757-8	WIRE, ELECTRICAL .020 DIA	16
[illegible]	[illegible]	~~WIRE, INSULATED~~	15
1	2004915	INSULATOR, PHOTO MASTER, SPECIAL LEVEL	14
1	2004914-011	INSULATOR, PHOTO MASTER, LOWER LEVEL	13
1	2004913	INSULATOR, PHOTO MASTER, UPPER LEVEL	12
1	2004912-011	INSULATOR, PHOTO MASTER, REAR	11
15	MS24693-C2	SCREW, FLAT HD, CROSS RECESSED	10
2	MS16633-4015	RING, RETAINING, EXTERNAL	9
2	1004546-1	WASHER, FLAT	8
2	1004546-3	WASHER, FLAT	7
2	1004579-1	SCREW, JACKING	6
1	2004956	COVER, REAR	5
1	2004911	COVER	4
1	2003908-011	DECODING CIRCUIT ASSY	3
1	2003910-011	RELAY CIRCUIT ASSY	2
1	2003907-011	HEADER ASSY	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003985	
2003900	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
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MIT INSTRUMENTATION LAB CAMBRIDGE MASS

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MANNED SPACECRAFT CENTER
HOUSTON TEXAS

INDICATOR DRIVER ASSY
MODULE DI-D6
AGC DSKY

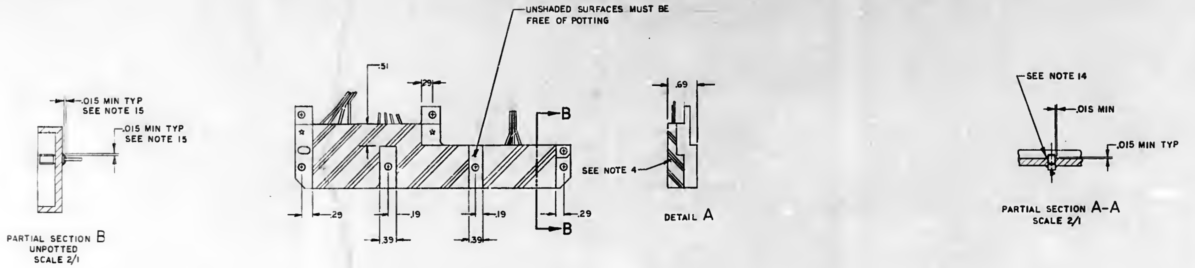
CODE IDENT NO 80230 SIZE J NASA DRAWING NO 2003902

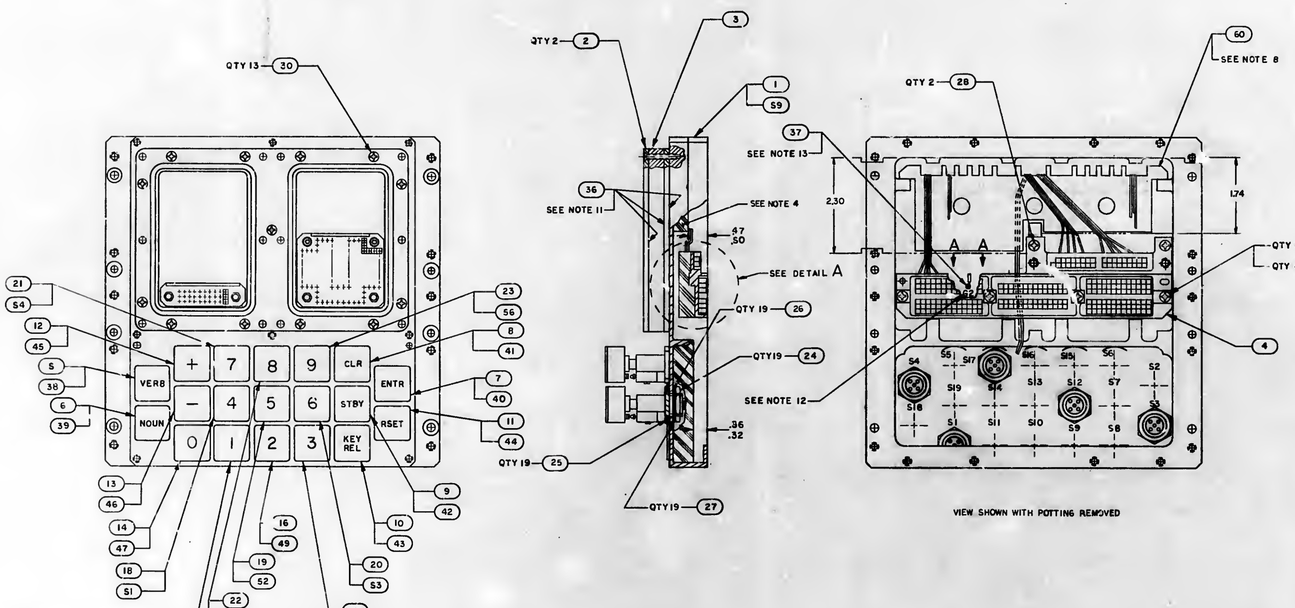
SCALE 2/1 SHEET 1 OF 1

2003902 B

2003903 E

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22463 DR [signature] CHK [signature]	11/4/65	[signature]
B	REVISED PER TDRR 23230 DR [signature] CHK [signature]	11/12/65	[signature]
C	REVISED PER TDRR 24665 DR [signature] CHK [signature]	12/20/65	[signature]
D	REVISED PER TDRR 25032 DR [signature] CHK [signature]	1/6/66	[signature]
E	REVISED PER TDRR 26855 DR [signature] CHK [signature]	3/14/66	[signature]





NOTES
1 INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32, 33, 35 & 60 TO FIND NO. 1 OR FIND NO. 59 PER ND1002004 TYPE IV
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. WIRE PER ND10020[illegible] USING LEAD ELECTRICAL
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15-20 INCH OUNCES
14. SEAL FIND NO 37 TO FIND NO. 1 OR FIND NO. 59 PER ND1002004 TYPE VI
15. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI

QTY REQD 031	QTY REQD 021	QTY REQD C11	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	X	—	2005951	INTERCONNECTING DIAGRAM	REF
—	—	X	2005901	INTERCONNECTING DIAGRAM	REF
AR	AR	AR	1010807-22	WIRE, INSULATED	61
1	1	—	2004971	COMB, WIRE	60
1	—	—	2004968-011	HOUSING, FRONT	59
AR	AR	AR	1010416-14	WIRE, INSULATED	58
AR	AR	AR	1010416-13	WIRE, INSULATED	57
1	1	—	2003974-211	SWITCH, ASSEMBLY PUSHBUTTON	56
1	1	—	-191		55
1	1	—	-181		54
1	1	—	-171		53
1	1	—	-161		52
1	1	—	-151		51
1	1	—	-141		50
1	1	—	-131		49
1	1	—	-121		48
1	1	—	-111		47
1	1	—	-091		46
1	1	—	-081		45
1	1	—	-071		44
1	1	—	-061		43
1	1	—	-051		42
1	1	—	-041		41
1	1	—	-031		40
1	1	—	-021		39
1	1	—	2003974-011	SWITCH, ASSEMBLY PUSHBUTTON	38
1	1	1	2004039	TERMINAL, THREADED	37
AR	AR	AR	1006879	SILICONE COMPOUND	36
AR	AR	AR	1010416-15	WIRE, INSULATED	35
AR	AR	AR	1012507-003	TAPE, LACING	34
AR	AR	AR	1010416-20	WIRE, INSULATED	33
AR	AR	AR	1010848-2	WIRE, INSULATED	32
4	4	4	NAS620-6L	WASHER, FLAT	31
13	13	13	MS35200-19	SCREW, FLAT HD, CROSS RECESSED	30
4	4	4	MS35216-27	SCREW, PAN HD, CROSS RECESSED	29
2	2	2	MS35200-25	SCREW, FLAT HD, CROSS RECESSED	28
19	19	19	1010635-003	WASHER, LOCK	27
19	19	19	2004540-001	WASHER, PLAIN	26
19	19	19	1000159-18	O RING SEAL	25
19	19	19	2004942	NUT, HEX	24
—	—	1	2003924-211	SWITCH, ASSEMBLY PUSHBUTTON	23
—	—	1	-191		22
—	—	1	-181		21
—	—	1	-171		20
—	—	1	-161		19
—	—	1	-151		18
—	—	1	-141		17
—	—	1	-131		16
—	—	1	-121		15
—	—	1	-111		14
—	—	1	-091		13
—	—	1	-081		12
—	—	1	-071		11
—	—	1	-061		10
—	—	1	-051		9
—	—	1	-041		8
—	—	1	-031		7
—	—	1	-021		6
—	—	1	2003924-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	1	1	2003915-011	CONNECTOR, PLATE ASSEMBLY	4
1	1	1	2003912-011	ADAPTER, PLATE ASSEMBLY	3
2	2	2	1006351	GASKET, PREFORMED	2
—	1	1	2004918-011	HOUSING, FRONT	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003985	
2003900	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

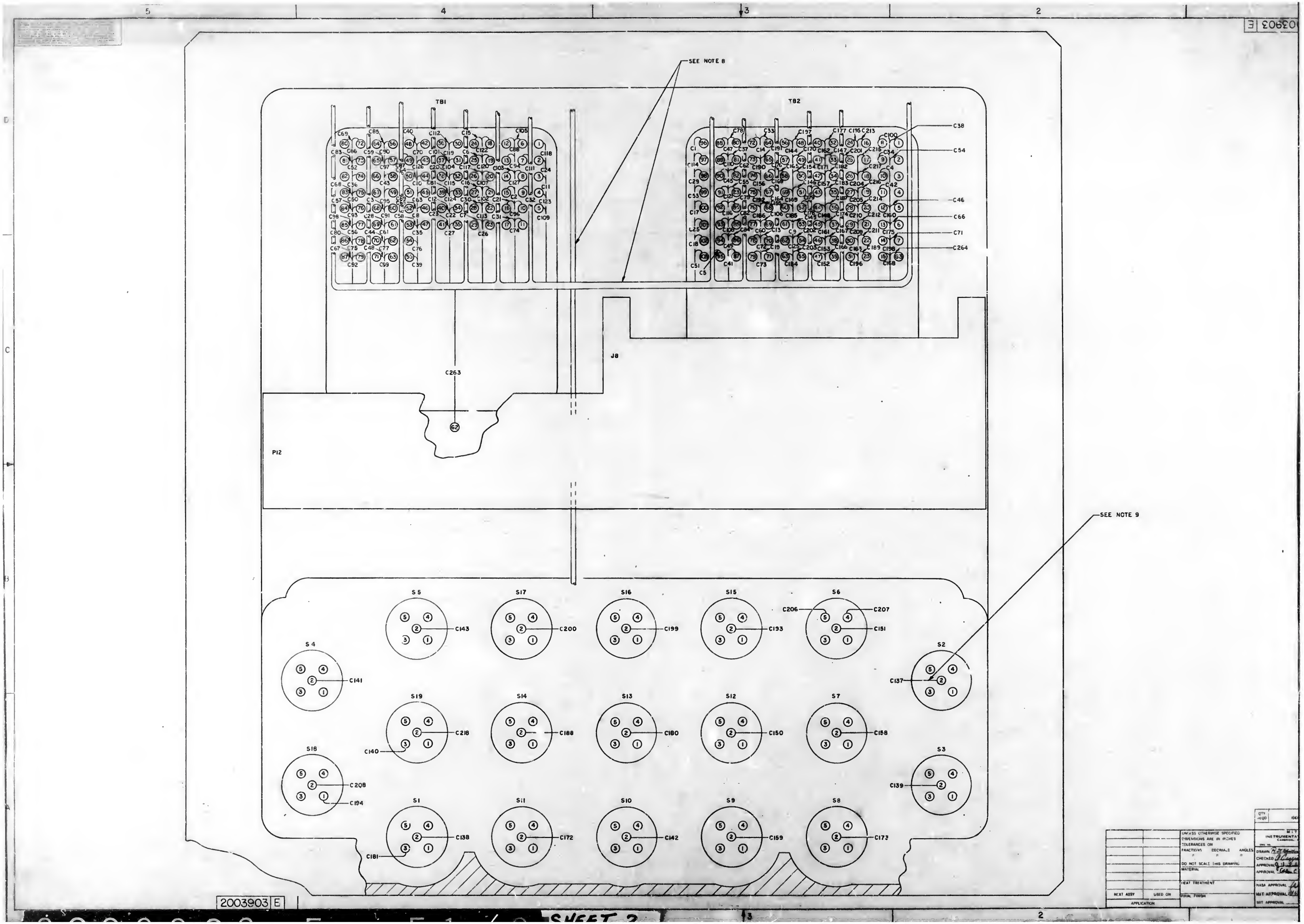
M.I.T. INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN [signature] DATE
CHECKED [signature]
APPROVAL [signature]
APPROVAL [signature]
NASA APPROVAL [signature]
MIT APPROVAL
MIT APPROVAL [signature]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003903
SCALE 1/1 | WT | SHEET 1 OF 3

2003903 E


SEE NOTE 8
TB1
TB2
C38
C54
C46
C66
C71
C264
J8
C263
P12
SEE NOTE 9
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C200
S16
C199
S15
C193
S6
C206
C207
C151
S4
C141
S2
C137
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C140
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C180
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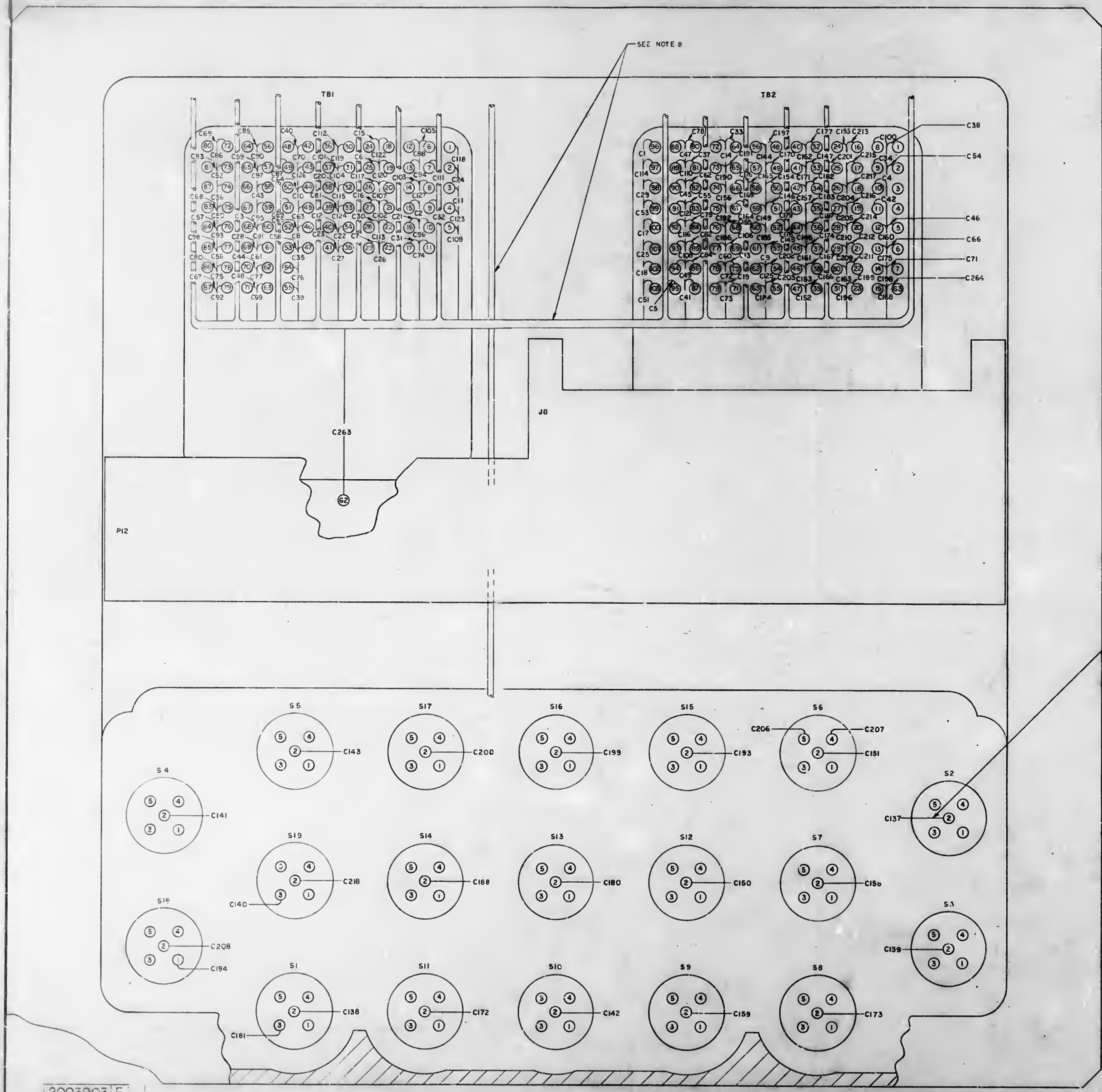
C150
S7
C158
S18
C208
C194
S3
C139
S1
C138
C181
S11
C172
S10
C142
S9
C159
S8
C173
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY
USED ON
APPLICATION
DRAWN
CHECKED
APPROVAL
NASA APPROVAL
MIT APPROVAL
2003903 E
SHEET 2

2003903 E

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22463 DR [illegible] CHK [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 23230 DR [illegible] CHK CAP	[illegible]	[illegible]
C	REVISED PER TDRR 24665 DR [illegible] CHK CAP	[illegible]	[illegible]
D	REVISED PER TDRR 25032 DR [illegible] CHK	1/6/66	[illegible]
E	REVISED PER TDRR 26856 DR [illegible] CHK	[illegible]	[illegible]



QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

NEXT ASSY | USED ON

APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN [illegible] DATE [illegible]
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]
MIT APPROVAL

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FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003903

SCALE NONE | WT | SHEET 2 OF 3

2003903 E

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	24	AR	TB2-96	
C2		-132					TB1-15	
C3		-133					TB1-66	
C4		-134					TB2-10	
C5		-127					TB2-95	
C6		-128					TB1-25	
C7		-129					TB1-21	
C8		-130					TB1-4	
C9		-123					TB2-61	
C10		-124					TB1-44	
C11		-125					TB1-3	
C12		-126					TB1-40	
C13		-119					TB2-70	
C14		-120					TB2-72	
C15		-121					TB1-74	
C16		-122					TB1-27	
C17		-115					TB2-100	
C18		-116					TB2-102	
C19		-117					TB2-71	
C20		-118					TB1-38	
C21		-111					TB1-16	
C22		-112					TB1-24	
C23		-113					TB1-41	
C24		-114					TB1-2	
C25		-107					TB2-101	
C26		-108					TB1-23	
C27		-109					TB1-35	
C28		-110					TB1-69	
C29		-103					TB2-98	
C30		-104					TB1-28	
C31		-105					TB1-17	
C32		-106					TB1-9	
C33		-99					TB2-64	
C34		-100					TB2-9	
C35		-101					TB1-47	
C36		-102					TB1-14	
C37		-95					TB2-81	
C38		-96					TB2-1	
C39		-97					TB1-55	
C40		-98					TB1-48	
C41		-91					TB2-87	
C42		-92					TB2-11	
C43		-93					TB1-58	
C44	SEE NOTE 6	-94					TB1-70	SEE NOTE 6
C45		-87					TB2-90	
C46		-88					TB2-5	
C47		-89					TB2-88	
C48		-90					TB1-71	
C49		-83					TB2-94	
C50		-84					TB1-75	
C51		-85					TB2-103	
C52		-86					TB1-73	
C53		-79					TB2-99	
C54		-80					TB2-2	
C55		-81					TB2-83	
C56		-82					TB1-77	
C57		-73					TB1-84	
C58		-74					TB1-53	
C59		-75					TB1-65	
C60		-76					TB2-77	
C61		-77					TB1-61	
C62		-78					TB2-82	
C63		-67					TB1-45	
C64		-68					TB1-50	
C65		-69					TB1-52	
C66		-70					TB2-6	
C67		-71					TB1-87	
C68		-72					TB1-83	
C69		-61					TB1-80	
C70		-62					TB1-42	
C71		-63					TB2-7	
C72		-64					TB2-78	
C73		-65					TB2-79	
C74		-66					TB1-11	
C75		-55					TB1-78	
C76		-56					TB1-54	
C77		-57					TB1-62	
C78		-58					TB2-80	
C79		-59					TB2-84	
C80		-60					TB1-86	
C81		-50					TB1-39	
C82		-51					TB2-85	
C83		-52					TB1-81	
C84		-53					TB2-86	
C85		-54					TB1-64	
C86		-43					TB1-72	
C87		-44					TB1-43	
C88		P12-45	32	WHT	24	AR	TB1-12	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	24	AR	TB1-51	
C90		-47					TB1-56	
C91		-48					TB1-60	
C92		-37					TB1-79	
C93		-38					TB1-76	
C94		-39					TB1-13	
C95		-40					TB1-59	
C96		-41					TB1-10	
C97		-42					TB1-57	
C98		-31					TB1-85	
C99		-32					TB1-63	
C100		-33					TB2-8	
C101		-34					TB1-37	
C102		-35					TB1-21	
C103		-36					TB1-14	
C104		-25					TB1-31	
C105		-27					TB1-6	
C106		-28					TB2-63	SEE NOTE 6
C107	SEE NOTE 6	-29					TB1-20	
C108		-30					TB2-93	
C109		-21					TB1-5	
C110		-22					TB2-89	
C111		-23					TB1-7	
C112		-24					TB1-36	
C113		-13					TB1-22	
C114		-15					TB2-97	
C115		-16					TB1-32	
C116		-17					TB2-92	
C117		-18					TB1-26	
C118		-7					TB1-1	
C119		-9					TB1-30	
C120		-10					TB1-19	
C121		-11					TB2-91	
C122		-12					TB1-18	
C123		-1					TB1-4	
C124		-3					TB1-33	
C125		-4					TB2-62	
C126		-5					TB1-43	
C127		P12-6	32	WHT	24		TB1-8	
C128	SEE NOTE 5	S16-1	35	YEL	26		S17-3	SEE NOTE 5
C129	SEE NOTE 5	S5-4	57	RED	26		S19-4	TWIST
C130		S5-5	58	ORN			S19-5	
C131		S19-4	57	RED			S1-4	TWIST
C132		S19-5	58	ORN			S1-5	
C133		S1-4	57	RED			S18-4	TWIST
C134		S1-5	58	ORN			S18-5	
C135	SEE NOTE 5	S18-4	57	RED			S4-4	TWIST
C136		S18-5	58	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140	SEE NOTE 5	-9					S19-3	SEE NOTE 5
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33		26		S5-2	
C144		P12-139	32		24		TB2-86	
C145		-136					TB2-53	
C146		-137					TB2-51	
C147	SEE NOTE 6	-138					TB2-33	SEE NOTE 6
C148		-139					TB2-44	
C149		P12-140	32		24		TB2-59	
C150	SEE NOTE 5	J8-14	33		26		S12-2	SEE NOTE 5
C151		J8-15	33		26		S6-2	
C152		P12-141	32		24		TB2-47	
C153		-142					TB2-46	
C154	SEE NOTE 6	-143					TB2-50	SEE NOTE 6
C155		-144					TB2-68	
C156		-145					TB2-74	
C157		P12-146	32		24		TB2-42	
C158	SEE NOTE 5	J8-16	33		26		S7-2	SEE NOTE 5
C159		J8-17	33	WHT	26		S9-2	
C160		P12-147	32	WHT	24		TB2-12	
C161		-148					-45	
C162		-149					-40	
C163		-150					-30	
C164		-151					-67	
C165	SEE NOTE 6	-152					-58	SEE NOTE 6
C166		-153					-39	
C167		-154					-38	
C168		-155					-15	
C169		-156					-56	
C170		-157					-49	
C171		P12-158	32	WHT	24		TB2-41	
C172	SEE NOTE 5	J8-18	33	WHT	26		S11-2	SEE NOTE 5
C173		J8-19	33	WHT	26		S8-2	
C174		P12-159	32	WHT	24		TB2-37	
C175	SEE NOTE 6	P12-160	32	WHT	24		TB2-43	SEE NOTE 6
C176		P12-161	32	WHT	24	AR	TB2-87	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	24	AR	TB2-32	
C178	SEE NOTE 6	P12-163	32	WHT	24		TB2-52	SEE NOTE 6
C179		P12-164	32	WHT	24		TB2-43	
C180	SEE NOTE 5	J8-20	33	WHT	26		S13-2	SEE NOTE 5
C181		J8-21	33	WHT	26		S1-3	
C182		P12-165	32	WHT	24		TB2-54	
C183		-166					-35	
C184	SEE NOTE 6	-167					-63	SEE NOTE 6
C185		-168					-60	
C186		-169					-76	
C187		P12-170	32		24		TB2-36	
C188	SEE NOTE 5	J8-22	33		26		S14-2	SEE NOTE 5
C189		P12-190	32		24		TB2-23	
C190		-174					-73	
C191	SEE NOTE 6	-175					-65	SEE NOTE 6
C192		P12-176	32		24		TB2-75	
C193	SEE NOTE 5	J8-24	33		26		S15-2	SEE NOTE 5
C194		J8-25	33		26		S18-1	
C195		P12-196	32		24		TB2-24	
C196	SEE NOTE 6	-192					-51	SEE NOTE 6
C197		-204					-48	
C198		P12-182	32		24		TB2-14	
C199	SEE NOTE 3	J8-26	33		26		S16-2	SEE NOTE 5
C200		J8-27	33		26		S17-2	
C201		P12-185	32		24		TB2-25	
C202		-210					-54	
C203	SEE NOTE 6	-187					-55	SEE NOTE 6
C204		-195					-26	
C205		-181	32	WHT	24		TB2-27	
C206	SEE NOTE 5	-193	58	ORN	26		S6-5	TWIST
C207		P12-194	57	RED	26		S6-4	SEE NOTE 5
C208	SEE NOTE 5	J8-30	33	WHT	26		S18-2	SEE NOTE 5
C209		P12-197	32	WHT	24		TB2-29	
C210		-209					-28	
C211		-191					-22	
C212		-201					-21	
C213	SEE NOTE 6	-202					-16	SEE NOTE 6
C214		-203					-20	
C215		-186					-17	
C216		-207					-19	
C217		-208	32	WHT	24		TB2-18	
C218		P12-179	33	WHT	26		S15-2	
C219		S1-1	35	YEL	26		S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225	SEE NOTE 5	S7-1					S8-3	SEE NOTE 5
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	57	RED			S5-4	TWIST
C235		S17-5	58	ORN			S5-5	
C236		S6-4	57	RED			S2-4	TWIST
C237		S6-5	58	ORN			S2-5	
C238		S2-4	57	RED			S7-4	TWIST
C239		S2-5	58	ORN			S7-5	
C240		S7-4	57	RED			S3-4	TWIST
C241		S7-5	58	ORN			S3-5	
C242		S3-4	57	RED			S8-4	TWIST
C243		S3-5	58	ORN			S8-5	
C244		S8-4	57	RED			S9-4	TWIST
C245		S8-5	58	ORN			S9-5	
C246		S9-4	57	RED			S12-4	TWIST
C247		S9-5	58	ORN			S12-5	
C248		S12-4	57	RED			S15-4	TWIST
C249		S12-5	58	ORN			S15-5	
C250		S15-4	57	RED			S16-4	TWIST
C251		S15-5	58	ORN			S16-5	
C252		S16-4	57	RED			S13-4	TWIST
C253		S16-5	58	ORN			S13-5	
C254		S13-4	57	RED			S10-4	TWIST
C255		S13-5	58	ORN			S10-5	
C256		S10-4	57	RED			S11-4	TWIST
C257		S10-5	58	ORN			S11-5	
C258		S11-4	57	RED			S14-4	TWIST
C259		S11-5	58	ORN			S14-5	
C260	SEE NOTE 5	S14-4	57	RED			S17-4	TWIST
C261		S14-5	58	ORN	26		S17-5	SEE NOTE 5
C262	SEE NOTE 5	S17-1	35	YEL	30	AR	S18-3	SEE NOTE 5
C263	SEE NOTE 6	P12-184	32	WHT	24	AR	62	SEE NOTE 6
C264		P12-183	61	WHT	26	AR	63	SEE NOTE 5

SEE NOTE 5

2003903 E

SHEET 3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
APPLICATION
QTY REQD
INSTRUMENTS
DRAWN
CHECKED
APPROVAL
NASA APPROVAL
MIT APPROVAL

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 22463 DR CHK APPD		
B	REVISED PER TDRR 23230 DR CHK APPD		
C	REVISED PER TDRR 24665 DR CHK APPD		
D	REVISED PER TDRR 25032 DR CHK APPD		
E	REVISED PER TDRR 26855 DR CHK APPD		

E.D. ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
J13	32	WHT	24	AR	TB2-96	
J5	8				TB1-15	
J33					TB1-68	
J34					TB2-10	
J27					TB2-95	
J28					TB1-25	
J29					TB1-29	
J30					TB1-46	
J23					TB2-61	
J24					TB1-44	
J25					TB1-3	
J26					TB1-40	
J11					TB2-70	
J20					TB2-72	
J21					TB1-24	
J12					TB1-27	
J15					TB2-100	
J16					TB1-102	
J17					TB2-71	
J18					TB1-38	
J11					TB1-16	
J12					TB1-34	
J13					TB1-41	
J14					TB1-2	
J07					TB2-101	
J08					TB1-23	
J09					TB1-35	
J10					TB1-69	
J03					TB2-98	
J10					TB1-28	
J01					TB1-17	
J06					TB1-9	
J99					TB2-64	
J00					TB2-9	
J01					TB1-47	
J02					TB1-74	
J95					TB2-81	
J96					TB2-1	
J97					TB1-55	
J98					TB1-48	
J91					TB2-87	
J92					TB2-11	
J93					TB1-58	
J94					TB1-70	SEE NOTE 6
J87					TB2-90	
J88					TB2-5	
J89					TB2-88	
J90					TB1-71	
J83					TB1-94	
J84					TB1-75	
J85					TB2-103	
J86					TB1-73	
J79					TB2-99	
J80					TB2-2	
J81					TB2-83	
J82					TB1-77	
J73					TB1-96	
J74					TB1-53	
J75					TB1-65	
J76					TB2-77	
J77					TB1-61	
J78					TB2-82	
J67					TB1-45	
J68					TB1-50	
J69					TB1-52	
J70					TB2-6	
J71					TB1-87	
J72					TB1-83	
J61					TB1-80	
J62					TB1-42	
J63					TB2-7	
J64					TB2-78	
J65					TB2-79	
J66					TB1-11	
J55					TB1-78	
J56					TB1-64	
J57					TB1-62	
J58					TB2-80	
J59					TB2-84	
J60					TB1-86	
J50					TB1-39	
J51					TB2-85	
J52					TB1-81	
J53					TB2-86	
J54					TB1-66	
J43					TB1-72	
J44					TB1-49	
J5	32	WHT	24	AR	TB1-12	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	24	AR	TB1-51	
C90		-47					TB1-56	
C91		-48					TB1-60	
C92		-37					TB1-79	
C93		-38					TB1-76	
C94		-39					TB1-13	
C95		-40					TB1-59	
C96		-41					TB1-10	
C97		-42					TB1-57	
C98		-31					TB1-85	
C99		-32					TB1-63	
C100		-33					TB2-8	
C101		-34					TB1-37	
C102		-35					TB1-21	
C103		-36					TB1-14	
C104		-25					TB1-31	
C105		-27					TB1-6	
C106		-28					TB2-69	SEE NOTE 6
C107	SEE NOTE 6	-29					TB1-20	
C108		-30					TB2-93	
C109		-21					TB1-5	
C110		-22					TB2-89	
C111		-23					TB1-7	
C112		-24					TB1-36	
C113		-13					TB1-22	
C114		-15					TB2-97	
C115		-16					TB1-32	
C116		-17					TB2-92	
C117		-18					TB1-26	
C118		-7					TB1-1	
C119		-9					TB1-30	
C120		-10					TB1-19	
C121		-11					TB2-91	
C122		-12					TB1-18	
C123		-1					TB1-4	
C124		-3					TB1-33	
C125		-4					TB2-62	
C126		-5					TB1-43	
C127		P12-6	32	WHT	24		TB1-8	
C128	SEE NOTE 5	S16-1	35	YEL	26		S17-3	SEE NOTE 5
C129	SEE NOTE 5	S9-4	57	RED	26		S19-4	TWIST
C130		S5-5	58	ORN			S15-5	
C131		S19-4	57	RED			S1-4	TWIST
C132		S19-5	58	ORN			S1-5	
C133		S1-4	57	RED			S18-4	TWIST
C134		S1-5	58	ORN			S18-5	
C135	SEE NOTE 5	S10-4	57	RED			S4-4	TWIST
C136		S18-5	58	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140	SEE NOTE 5	-9					S19-3	SEE NOTE 5
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33		26		S5-2	
C144		P12-135	32		24		TB2-96	
C145		-136					TB2-53	
C146		-137					TB2-51	
C147	SEE NOTE 6	-138					TB2-33	SEE NOTE 6
C148		-139					TB2-44	
C149		P12-140	32		24		TB2-59	
C150	SEE NOTE 5	J8-14	33		26		S12-2	SEE NOTE 5
C151		J8-15	33		26		S6-2	
C152		P12-141	32		24		TB2-47	
C153		-142					TB2-46	
C154	SEE NOTE 6	-143					TB2-50	SEE NOTE 6
C155		-144					TB2-68	
C156		-145					TB2-74	
C157		P12-146	32		24		TB2-42	
C158	SEE NOTE 5	J8-16	33		26		S7-2	SEE NOTE 5
C159		J8-17	33	WHT	26		S9-2	
C160		P12-147	32	WHT	24		TB2-12	
C161		-148					-45	
C162		-149					-40	
C163		-150					-30	
C164		-151					-67	
C165	SEE NOTE 6	-152					-58	SEE NOTE 6
C166		-153					-39	
C167		-154					-38	
C168		-155					-15	
C169		-156					-56	
C170		-157					-49	
C171		P12-158	32	WHT	24		TB2-41	
C172	SEE NOTE 5	J8-18	33	WHT	26		S11-2	SEE NOTE 5
C173		J8-19	33	WHT	26		S8-2	
C174		P12-159	32	WHT	24		TB2-37	
C175	SEE NOTE 6	P12-160	32	WHT	24		TB2-13	SEE NOTE 6
C176		P12-161	32	WHT	24	AR	TB2-57	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	24	AR	TB2-32	
C178	SEE NOTE 6	P12-163	32	WHT	24		TB2-52	SEE NOTE 6
C179		P12-164	32	WHT	24		TB2-48	
C180	SEE NOTE 5	J8-20	33	WHT	26		S13-2	SEE NOTE 5
C181		J8-21	33	WHT	26		S1-3	
C182		P12-165	32	WHT	24		TB2-54	
C183		-166					-55	
C184	SEE NOTE 6	-167					-53	SEE NOTE 6
C185		-168					-70	
C186		-169					-76	
C187		P12-170	32		24		TB2-36	
C188	SEE NOTE 5	J8-22	33		26		S14-2	SEE NOTE 5
C189		P12-190	32		24		TB2-23	
C190		-174					-73	
C191	SEE NOTE 6	-175					-65	SEE NOTE 6
C192		P12-176	32		24		TB2-75	
C193	SEE NOTE 5	J8-24	33		26		S15-2	SEE NOTE 5
C194		J8-25	33		26		S18-1	
C195		P12-196	32		24		TB2-24	
C196	SEE NOTE 6	-192					-31	SEE NOTE 6
C197		-204					-46	
C198		P12-182	32		24		TB2-14	
C199	SEE NOTE 5	J8-26	33		26		S16-2	SEE NOTE 5
C200		J8-27	33		26		S17-2	
C201		P12-185	32		24		TB2-25	
C202		-210					-54	
C203	SEE NOTE 6	-187					-55	SEE NOTE 6
C204		-195					-76	
C205		-181	32	WHT	24		TB2-27	
C206	SEE NOTE 5	-193	58	ORN	26		S6-5	TWIST
C207		P12-194	57	RED	26		S6-4	
C208	SEE NOTE 5	J8-30	33	WHT	26		S18-2	SEE NOTE 5
C209		P12-197	32	WHT	24		TB2-29	
C210		-209					-28	
C211		-191					-22	
C212		-201					-21	
C213	SEE NOTE 6	-202					-16	SEE NOTE 6
C214		-203					-20	
C215		-186					-17	
C216		-207					-19	
C217		-208	32	WHT	24		TB2-18	
C218		P12-179	33	WHT	26		S19-2	
C219		S1-1	35	YEL	26		S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225	SEE NOTE 5	S7-1					S8-3	SEE NOTE 5
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	57	RED			S5-4	TWIST
C235		S17-5	58	ORN			S5-5	
C236		S6-4	57	RED			S2-4	TWIST
C237		S6-5	58	ORN			S2-5	
C238		S2-4	57	RED			S7-4	TWIST
C239		S2-5	58	ORN			S7-5	
C240		S7-4	57	RED			S3-4	TWIST
C241		S7-5	58	ORN			S3-5	
C242		S3-4	57	RED			S8-4	TWIST
C243		S3-5	58	ORN			S8-5	
C244		S8-4	57	RED			S9-4	TWIST
C245		S8-5	58	ORN			S9-5	
C246		S9-4	57	RED			S2-4	TWIST
C247		S9-5	58	ORN			S2-5	
C248		S2-4	57	RED			S15-4	TWIST
C249		S2-5	58	ORN			S5-5	
C250		S15-4	57	RED			S6-4	TWIST
C251		S15-5	58	ORN			S6-5	
C252		S6-4	57	RED			S13-4	TWIST
C253		S6-5	58	ORN			S3-5	
C254		S3-4	57	RED			S10-4	TWIST
C255		S3-5	58	ORN			S10-5	
C256		S10-4	57	RED			S11-4	TWIST
C257		S10-5	58	ORN			S11-5	
C258		S11-4	57	RED			S14-4	TWIST
C259		S11-5	58	ORN			S14-5	
C260	SEE NOTE 6	S14-4	57	RED			S17-4	TWIST
C261		S14-5	58	ORN	26		S17-5	
C262	SEE NOTE 5	S17-1	35	YEL	30	AR	S18-3	SEE NOTE 5
C263	SEE NOTE 6	P12-184	32	WHT	24	AR	62	SEE NOTE 6
C264		P12-183	61	WHT	3	AR	63	SEE NOTE 5

SEE NOTE 5

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
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MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
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CHECKED
APPROVED
APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

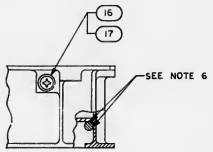
FRONT HOUSING ASSEMBLY

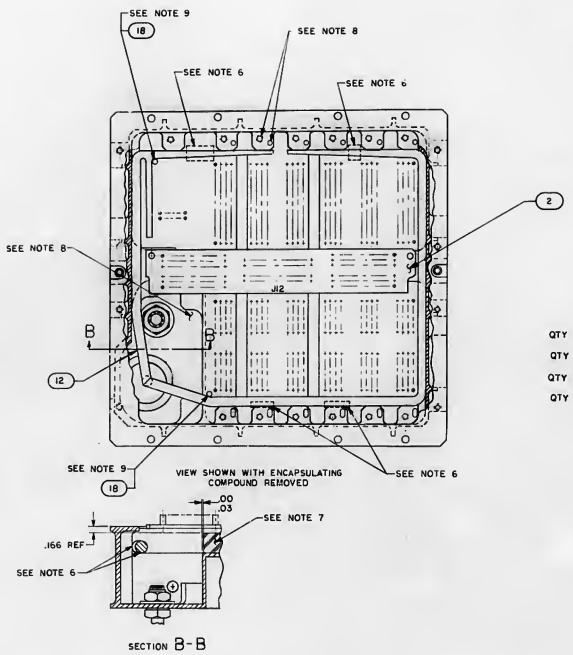
AGC DSKY

NASA APPROVAL
MIT APPROVAL

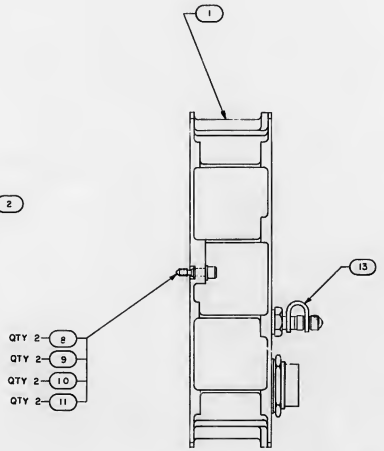
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003903

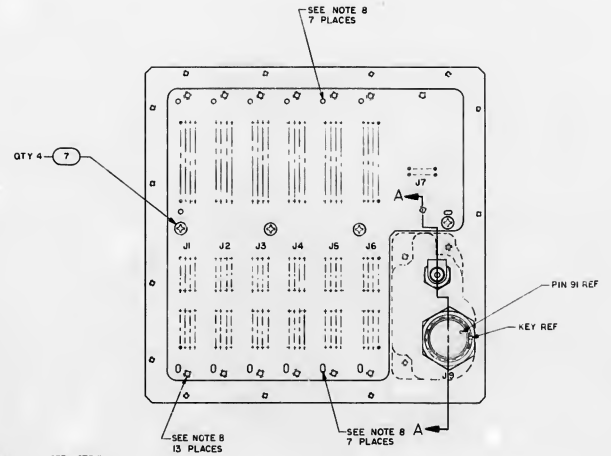
SCALE NONE | WT | SHEET 3 OF 3

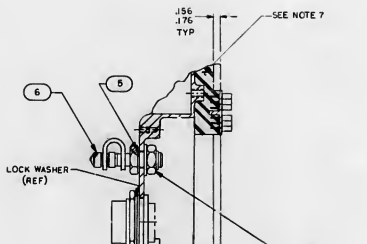




SECTION B-B







SECTION A-A

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. IDENTIFY WITH DRAWING NO. AND REVISION PER NDI002019
3. WIRE PER NDI002031 USING LEAD ELECTRICAL
4. MOUNTING TORQUE FOR FIND NO. 3 TO BE 10 TO 11 FT-LBS
5. AR DENOTES AS REQUIRED
6. BOND FIND NO. 12 TO FIND NO. 1 PER NDI002004 TYPE IV IN AREAS INDICATED
7. ENCAPSULATE INDICATED AREAS PER NDI002236
8. INDICATED AREA AND HOLES TO BE FREE FROM ENCAPSULATING COMPOUND
9. LACE FIND NO. 12 TO FIND NO. 1 WHERE SHOWN USING FIND NO. 18
10. DRESS AND TRIM USING FIND NO. 18

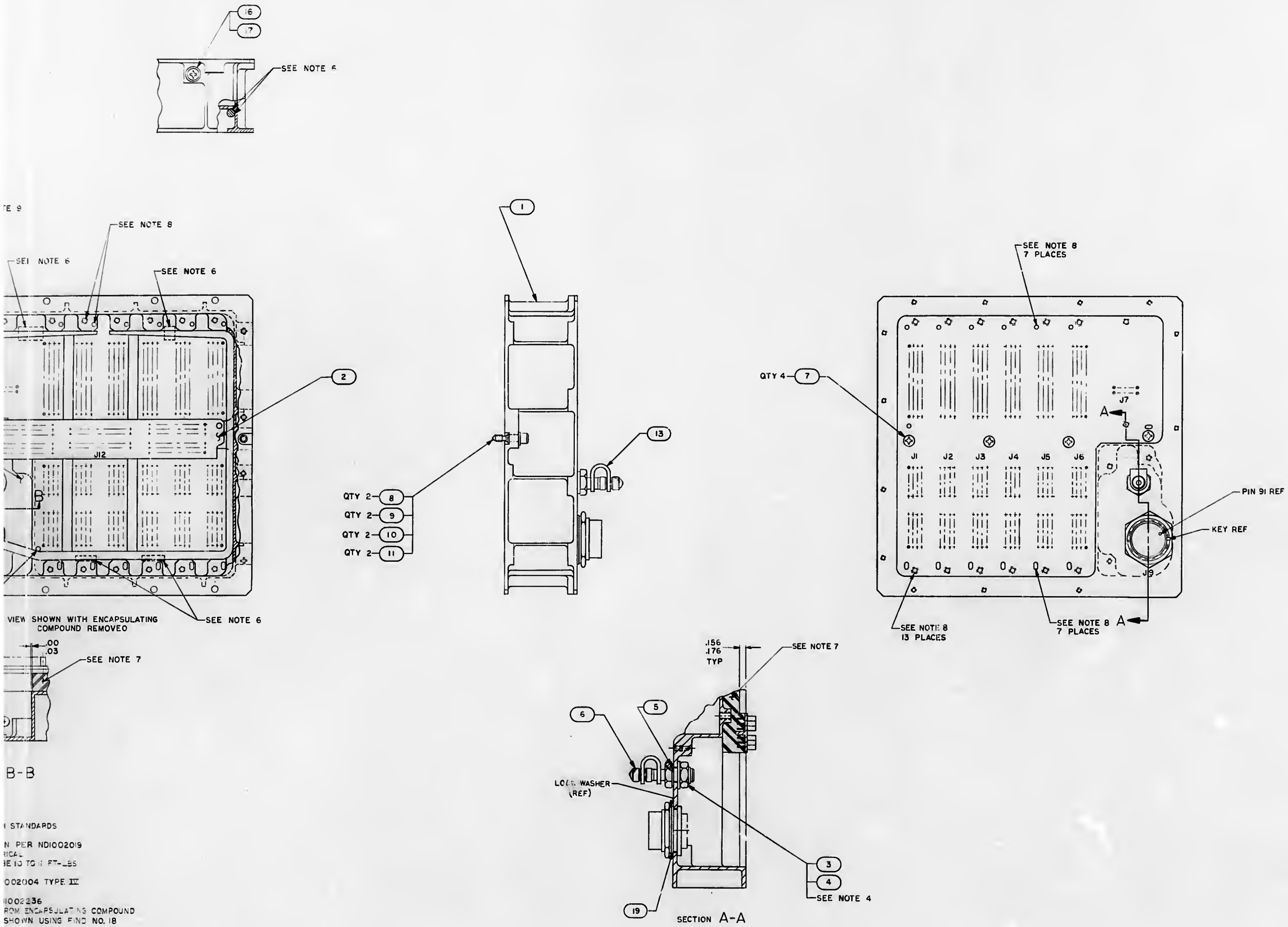
QTY REQD	
011	
1	100
AR	101
1	NAS
1	MS
AR	101
AR	101
1	20
1	20
2	MS
2	100
2	100
2	100
4	MS
1	100
1	100
1	MS
1	MS
1	20
1	20

			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL
2003900			HEAT TREATMENT
NEXT ASSY	USED ON		FINISH
APPLICATION			

2003904

REVISIONS 20857

SYM	DESCRIPTION	DATE	APPROVAL



H STANDARDS

N PER ND1002019
RICAL
BE 10 TO 11 FT-LBS

002004 TYPE IV

1002236
ROM ENCAPSULATING COMPOUND
SHOWN USING FIND NO. 18

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
☒	2005901	INTERCONNECTING DIAGRAM	REF
1	1004546-5	WASHER, FLAT	19
AR	1012507-003	TAPE, LACING	18
1	NAS1598D08N	WASHER, SEALING	17
1	MS35216-39	SCREW, PAN HD, CROSS RECESSED	16
AR	1010807-22	WIRE, INSULATED	15
AR	1010940-004	WIRE, INSULATED	14
1	2004931	RETAINER, VALVE CAP	13
1	2003930-011	WIRING HARNESS, BRANCHED	12
2	MS16633-4015	RING, RETAINING	11
2	1004546-3	WASHER, FLAT	10
2	1004546-1	WASHER, FLAT	9
2	1004579-2	SCREW, JACKING	8
4	MS35200-25	SCREW, FLAT HD, CROSS RECESSED	7
1	1006345	VALVE, PNEUMATIC TANK	6
1	1000159-14	PACKING, PREFORMED, O-RING	5
1	MS15795-314	WASHER, FLAT	4
1	MS20364D624A	NUT, HEX	3
1	2003916-011	CONNECTOR PLATE ASSY	2
1	2003917-011	IDM WIREWRAP PLATE ASSY	1
011	LIST OF MATERIALS		

2003900	
NEXT ASSY	USED ON
APPLICATION	

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TOLERANCES ON
FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

MIT INSTRUMENTATION LAB
Cambridge Mass

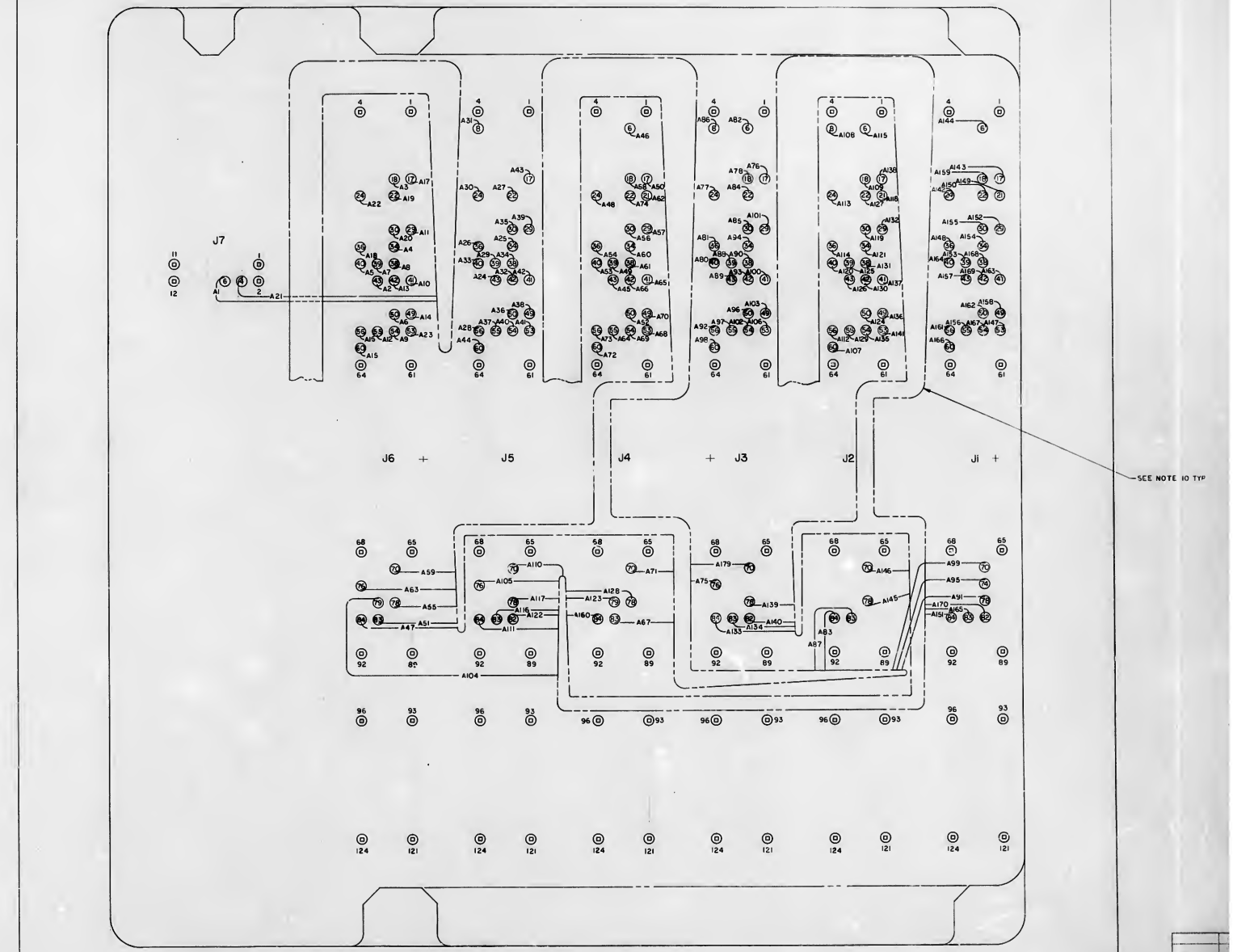
DRAWN K. Simpson DATE 8 APR 65
CHECKED Mayer 10 June 65
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL W J [illegible]
MIT APPROVAL [illegible] 7-13-65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

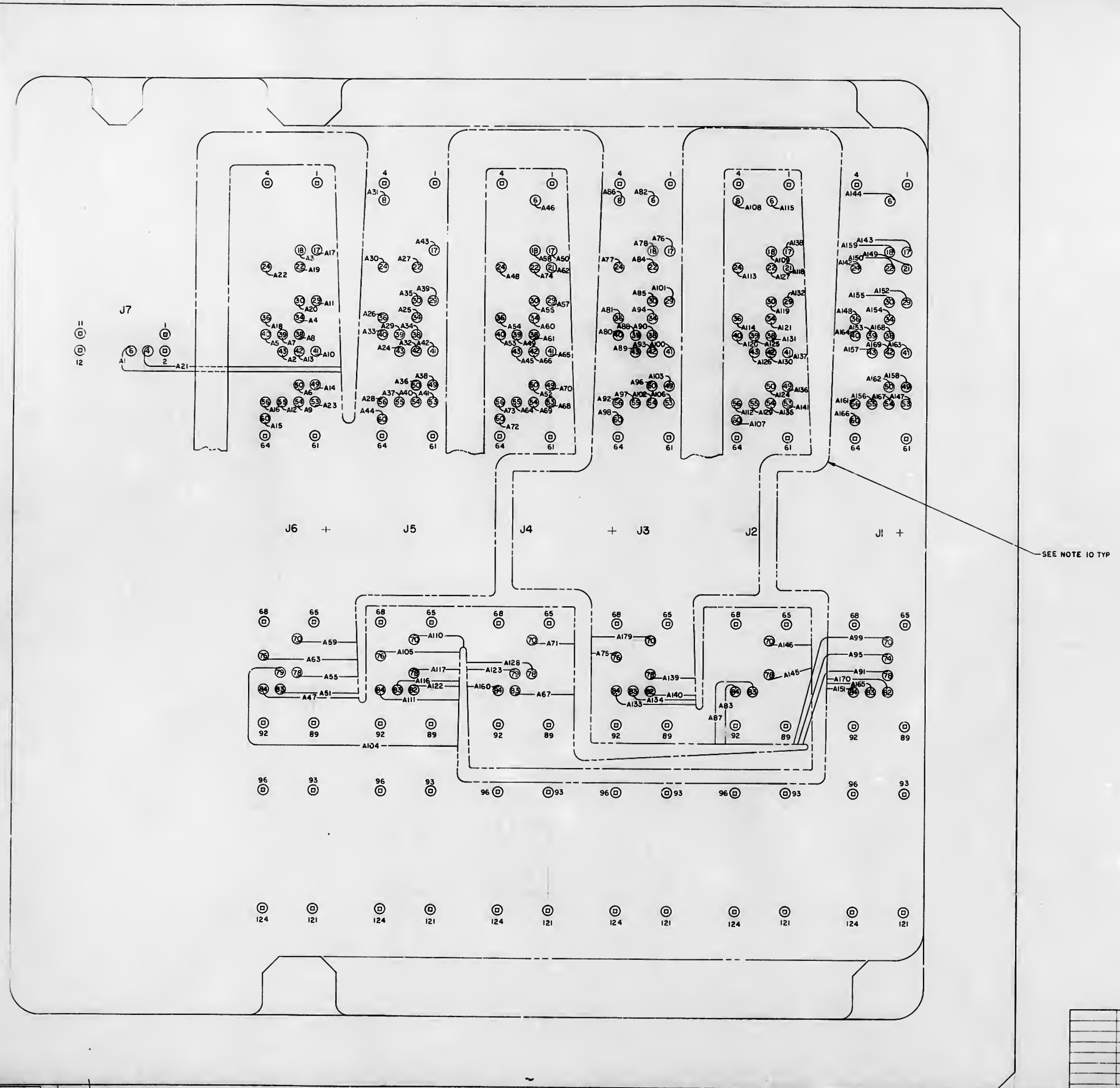
MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003904
SCALE 1/1	WT	SHEET 1 OF 3

2003904



2003904



2003904

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES

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NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003904

SCALE NONE | WT | SHEET 2 OF 3

2003904

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A		J2-166	14	YEL	30	AR	J7-6	
A2		-167	14	YEL	30		J6-43	
A3		-160	15	WHT	26		-18	
A4		-159	14	YEL	30		-34	
A5		-154					-40	
A6		-153					-50	
A7		-148	14	YEL	30		-39	
A8		-147	15	WHT	26		-38	
A9		-142	14	YEL	30		-54	
A10		-141					-41	
A11		-136					-29	
A12		-135					-55	
A13		-167					-42	
A14		-210	14	YEL	30		-49	
A15		-182	15	WHT	26		-60	
A16		-204	14	YEL	30		-56	
A17		-192					-17	
A18		-176					-36	
A19		-175					-22	
A20		-174					J6-30	
A21		-170					J7-4	
A22		-169					J6-24	
A23		-168					J6-53	
A24		-164					J5-43	
A25		-163					-34	
A26		-162					-36	
A27		-161					-22	
A28		-158					-56	
A29		-157					-39	
A30		-156	14	YEL	30		-24	
A31		-155	15	WHT	26		-8	
A32		-152	14	YEL	30		-42	
A33		-151	14	YEL	30		-40	
A34		-150	15	WHT	26		-38	
A35		-149	14	YEL	30		-30	
A36	SEE NOTE 3	-146					-50	SEE NOTE 3
A37		-145					-55	
A38		-144					-49	
A39		-143					-29	
A40		-140					-54	
A41		-139					-53	
A42		-138					-41	
A43		-137	14	YEL	30		-17	
A44		-134	15	WHT	26		J5-60	
A45		-133	14	YEL	30		J4-43	
A46		-132					J4-6	
A47		-131					J6-84	
A48		-130					J4-24	
A49		-129					J4-39	
A50		-128					J4-17	
A51		-127					J6-83	
A52		-126					J4-50	
A53		-125					J4-40	
A54		-124					J4-36	
A55		-123					J6-78	
A56		-122					J4-30	
A57		-121					J4-29	
A58		-120					J4-18	
A59		-119					J6-70	
A60		-118					J4-34	
A61		-117					J4-38	
A62		-116					J4-21	
A63		-115					J6-76	
A64		-114					J4-55	
A65		-113					-41	
A66		-112					-42	
A67		-111					-83	
A68		-110					-53	
A69		-109					-54	
A70		-108					-49	
A71		-107					-70	
A72		J12-106	14	YEL	30	AR	J4-60	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A73		J12-105	14	YEL	30	AR	J4-56	
A74		-104					J4-22	
A75		-103					J3-76	
A76		-102					-17	
A77		-101	14	YEL	30		-24	
A78		-100	15	WHT	26		-18	
A79		-99	14	YEL	30		-70	
A80		-98	14	YEL	30		-40	
A81		-97	14	YEL	30		-36	
A82		-96	15	WHT	26		J3-6	
A83		-95	14	YEL	30		J2-84	
A84		-94	14	YEL	30		J3-22	
A85		-93	14	YEL	30		J3-30	
A86		-92	15	WHT	26		J3-8	
A87		-91	14	YEL	30		J2-83	
A88		-90	14	YEL	30		J3-39	
A89		-89	14	YEL	30		J3-43	
A90		-88	15	WHT	26		J3-38	
A91		-87	14	YEL	30		J1-78	
A92		-86					J3-56	
A93		-85					J3-42	
A94		-84					J3-34	
A95		-83					J1-74	
A96		-82					J3-50	
A97		-81	14	YEL	30		J3-55	
A98		-80	15	WHT	26		J3-60	
A99		-79	14	YEL	30		J1-70	
A100		-78					J3-41	
A101		-77					J3-29	
A102		-76					J3-54	
A103		-75					J3-49	
A104		-74					J6-79	
A105		-73					J5-76	
A106		-72					J3-53	
A107		-71	14	YEL	30		J2-60	
A108	SEE NOTE 3	-70	15	WHT	26		J2-8	SEE NOTE 3
A109		-69	14	YEL	30		J6-18	
A110		-68					J5-70	
A111		-67					J5-84	
A112		-66					J2-56	
A113		-65					J2-24	
A114		-64	14	YEL	30		J2-36	
A115		-63	15	WHT	26		J2-6	
A116		-62	14	YEL	30		J5-83	
A117		-61					J5-78	
A118		-60					J2-21	
A119		-59					J2-30	
A120		-58					J2-40	
A121		-57					J2-34	
A122		-56					J5-82	
A123		-55					J4-79	
A124		-54					J2-50	
A125		-53					J2-39	
A126		-52					J2-43	
A127		-51					J2-22	
A128		-50					J4-78	
A129		-48					J2-55	
A130		-47					J2-42	
A131		-46					J2-38	
A132		-45					J2-29	
A133		-44					J3-84	
A134		-43					J3-85	
A135		-42					J2-54	
A136		-41					J2-49	
A137		-40					J2-41	
A138		-39					J2-17	
A139		-38					J3-78	
A140		-37					J3-82	
A141		-36					J2-53	
A142		-35					J1-24	
A143		-34	14	YEL	30		J1-17	
A144		J12-33	15	WHT	26	AR	J1-6	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A145		J12-32	14	YEL	30	AR	J2-78	
A146		-31					J2-70	
A147		-30					J1-53	
A148		-29					-36	
A149		-28					-21	
A150		-27					-22	
A151		-25					-84	
A152		-24					-29	
A153		-23					-39	
A154		-22					-34	
A155		-21					-30	
A156	SEE NOTE 3	-18					-55	SEE NOTE 3
A157		-17					-43	
A158		-16					-49	
A159		-15					J1-8	
A160		-13					J6-84	
A161		-12					J1-56	
A162		-11					-50	
A163		-10					-41	
A164		-9					-40	
A165		-7					-83	
A166		-6					-60	
A167		-5					-54	
A168		-4					-36	
A169		-3					-42	
A170		J12-1	14	YEL	30	AR	J1-82	

2003904

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
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MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON APPLICATION

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APPROVAL
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NASA APPROV
GSFC APPROV

2003904

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL

...EAD ELECTRICAL

...RO[M]	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
-[illegible]	14	YEL	30	AR	J7-6	
-[illegible]		YEL			J6-43	
-160					-18	
-159					-24	
-154					-40	
-163					-50	
-148					-39	
-147					-38	
-142					-54	
-141					-41	
-136					-29	
-135					-55	
-187					-42	
-210	14	YEL			-49	
-182	15	WHT	26		-60	
-204	14	YEL			-56	
-192					-17	
-176					-36	
-175					-22	
-174					J6-30	
-170					J7-4	
-169					J6-24	
-168					J6-53	
-164					J5-43	
-163					-34	
-162					-36	
-161					-22	
-158					-56	
-157					-39	
-156	14	YEL	30		-24	
-155	15	WHT	26		-8	
-152	14	YEL	30		-42	
-151	14	YEL	30		-40	
-150	15	WHT	26		-38	
-149	14	YEL	30		-30	
-146					-50	
-145					-55	SEE NOTE 3
-144					-49	
-143					-29	
-140					-54	
-139					-53	
-138					-41	
137	14	YEL	30		-17	
134	15	WHT	26		J5-60	
133	14	YEL	30		J4-43	
132					J4-6	
131					J6-84	
130					J4-24	
129					J4-39	
128					J4-17	
127					J6-83	
126					J4-50	
125					J4-40	
124					J4-36	
123					J6-78	
122					J4-30	
121					J4-29	
120					J4-18	
119					J6-70	
118					J4-34	
117					J4-38	
116					J4-21	
115					J6-76	
114					J4-55	
113					-41	
112					-42	
111					-83	
110					-53	
109					-54	
108					-49	
107					-70	
106	14	YEL	30	AR	J4-60	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A73		J12-105	14	YEL	30	AR	J4-56	
A74		-104					J4-22	
A75		-103					J3-76	
A76		-102					-17	
A77		-101	14	YEL	30		-24	
A78		-100	15	WHT	26		-18	
A79		-99	14	YEL	30		-70	
A80		-98	14	YEL	30		-40	
A81		-97	14	YEL	30		-36	
A82		-96	15	WHT	26		J3-6	
A83		-95	14	YEL	30		J2-84	
A84		-94	14	YEL	30		J3-22	
A85		-93	14	YEL	30		J3-30	
A86		-92	15	WHT	26		J3-8	
A87		-91	14	YEL	30		J2-83	
A88		-90	14	YEL	30		J3-39	
A89		-89	14	YEL	30		J3-43	
A90		-88	15	WHT	26		J3-38	
A91		-87	14	YEL	30		J1-78	
A92		-86					J3-56	
A93		-85					J3-42	
A94		-84					J3-34	
A95		-83					J1-74	
A96		-82					J3-50	
A97		-81	14	YEL	30		J3-55	
A98		-80	15	WHT	26		J3-60	
A99		-79	14	YEL	30		J1-70	
A100		-78					J3-41	
A101		-77					J3-29	
A102		-76					J3-54	
A103		-75					J3-49	
A104		-74					J6-79	
A105		-73					J5-76	
A106		-72					J3-53	
A107		-71	14	YEL	30		J2-60	
A108	SEE NOTE 3	-70	15	WHT	26		J2-8	SEE NOTE 3
A109		-69	14	YEL	30		J2-18	
A110		-68					J5-70	
A111		-67					J5-84	
A112		-66					J2-56	
A113		-65					J2-24	
A114		-64	14	YEL	30		J2-36	
A115		-63	15	WHT	26		J2-6	
A116		-62	14	YEL	30		J5-83	
A117		-61					J5-78	
A118		-60					J2-21	
A119		-59					J2-30	
A120		-58					J2-40	
A121		-57					J2-34	
A122		-56					J5-82	
A123		-55					J4-79	
A124		-54					J2-50	
A125		-53					J2-39	
A126		-52					J2-43	
A127		-51					J2-22	
A128		-50					J4-78	
A129		-48					J2-55	
A130		-47					J2-42	
A131		-46					J2-38	
A132		-45					J2-29	
A133		-44					J3-84	
A134		-43					J3-83	
A135		-42					J2-54	
A136		-41					J2-49	
A137		-40					J2-41	
A138		-39					J2-17	
A139		-38					J3-78	
A140		-37					J3-82	
A141		-36					J2-53	
A142		-35					J1-24	
A143		-34	14	YEL	30		J1-17	
A144		J12-33	15	WHT	26	AR	J1-6	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A145		J12-32	14	YEL	30	AR	J2-78	
A146		-31					J2-70	
A147		-30					J1-53	
A148		-29					-36	
A149		-28					-21	
A150		-27					-22	
A151		-25					-84	
A152		-24					-29	
A153		-23					-39	
A154		-22					-34	
A155		-21					-30	
A156	SEE NOTE 3	-18					-55	SEE NOTE 3
A157		-17					-43	
A158		-16					-49	
A159		-15					J1-18	
A160		-13					J4-84	
A161		-12					J1-56	
A162		-11					-50	
A163		-10					-41	
A164		-9					-40	
A165		-7					-83	
A166		-6					-60	
A167		-5					-54	
A168		-4					-38	
A169		-3					-42	
A170		J12-1	14	YEL	30	AR	J1-82	

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge Mass

DRAWN [signature] DATE
CHECKED [signature]
APPROVAL [signature]
APPROVAL [signature]
NASA APPROVAL [signature]
MIT APPROVAL [signature]

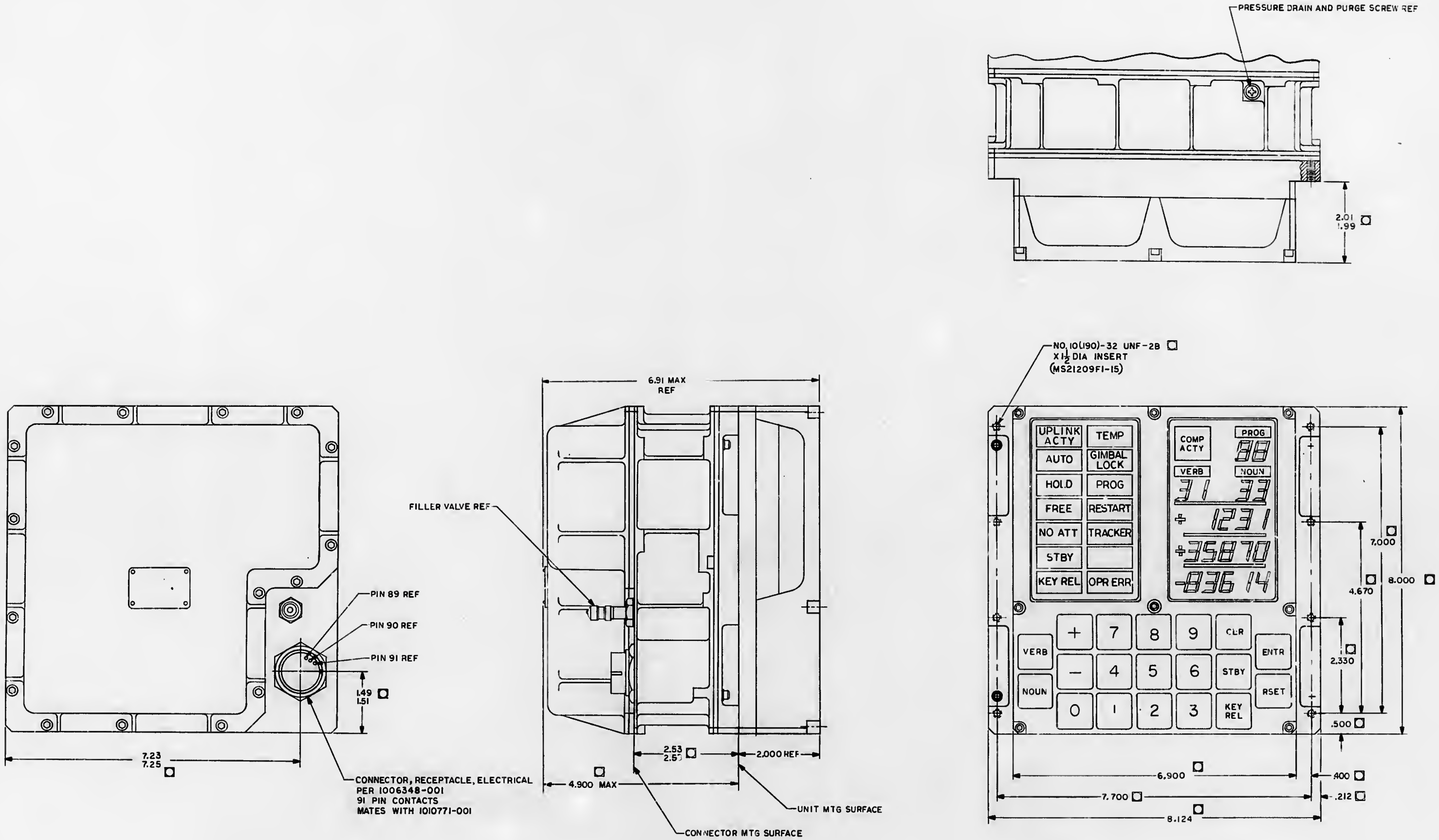
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003904
SCALE NONE | WT | SHEET 3 OF 3

2003904

2003904



NOTES
1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT *later*
4. ⊕ INDICATES CENTER OF GRAVITY *locate later*

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION

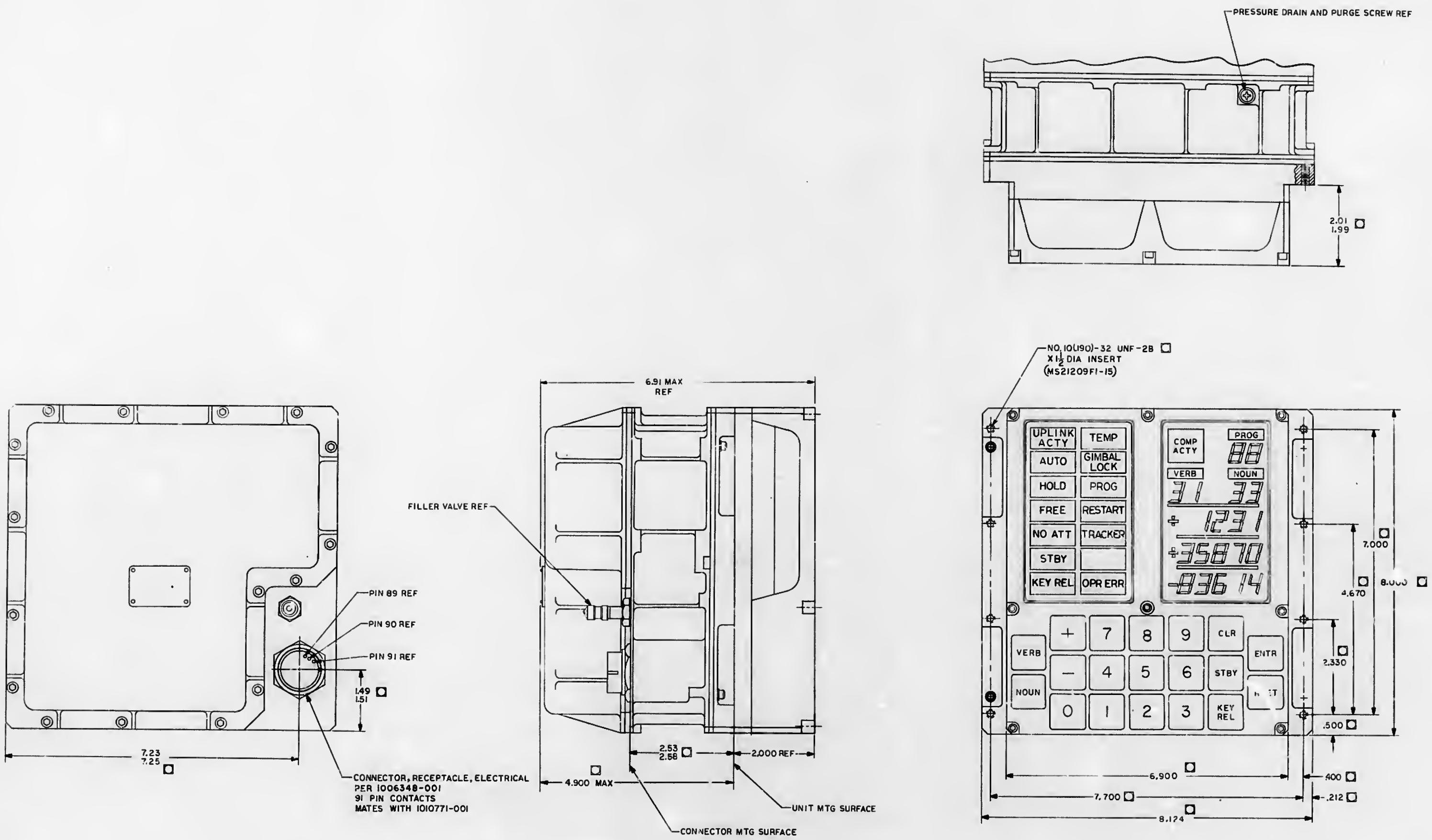
LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ±.005 ANGLES	MIT INSTRUMENTATION LAB CAMBRIDGE MASS
DO NOT SCALE THIS DRAWING	DRAWN A.J. Bixon DATE 2 APR 65
MATERIAL	CHECKED
HEAT TREATMENT	APPROVAL
FINAL FINISH	APPROVAL
NEXT ASSY / USED ON / APPLICATION	NASA APPROVAL W.J. R...
	MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY
OUTLINE DRAWING

CODE IDENT NO.	SIZE	NASA DRAWING NO
80230	J	200390
SCALE 1/1	WT	SHEET



ES
1 ☐ DIMENSIONS CONTROLLED BY ICD MH01-
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT *later*
4 ⊕ INDICATES CENTER OF GRAVITY *locate later*

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M.I.T. INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN *A.J. Bixon* DATE 21APR65
CHECKED
APPROVAL
APPROVAL *12 July 65*
NASA APPROVAL *W. J. R.*
MIT APPROVAL

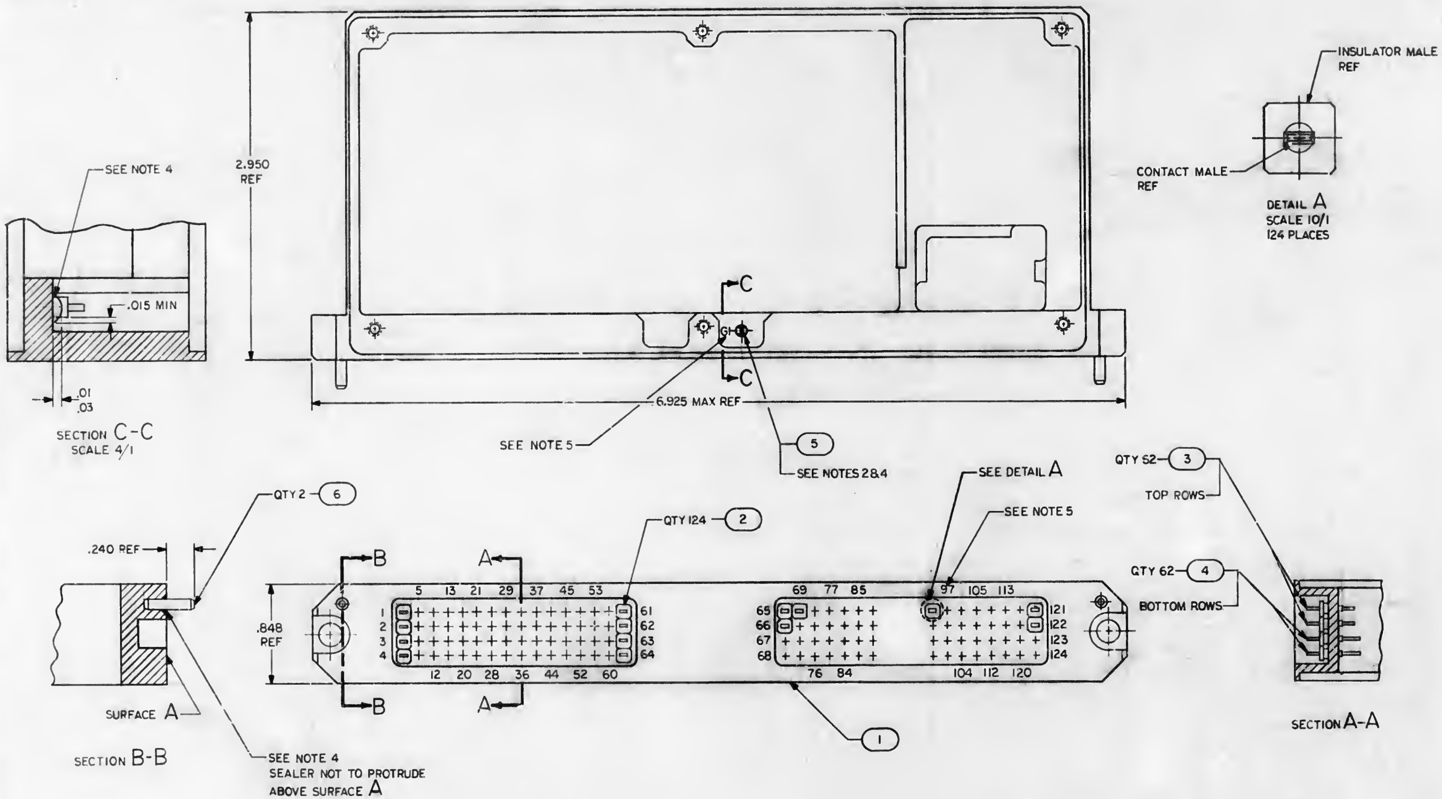
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

AGC DSKY
OUTLINE DRAWING

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003906
SCALE 1/1	WT	SHEET 1 OF 1

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 22162				
B		REVISED PER TDRR 25151				

2003907 B



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO.5 TO BE 15-20 INCH OUNCES
3. ASSEMBLE FIND NO.2, FIND NO.3 & FIND NO.4 TO FIND NO.1 PER ND1002136
4. SEAL FIND NO.5 AND FIND NO.6 TO FIND NO.1 PER ND1002004, TYPE VI
5. MARK .05/.07 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2 USING INK 1006271-1 CENTRALIZE AS SHOWN
6. IDENTIFY WITH PART NO. PER ND1002019

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTE	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	MS16555-619		PIN, DOWEL	6
1	2004039		TERMINAL, THREADED	5
62	1006782-6		CONTACT, WRAPOST-MALE, MINATURE	4
62	1006782-1		CONTACT, WRAPOST-MALE, MINATURE	3
124	1006775		INSULATOR, WRAPOST-MALE, MINATURE	2
1	2004910		HEADER, HOUSING	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003952	
2003902	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN µf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES ± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED MSC — DATE

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

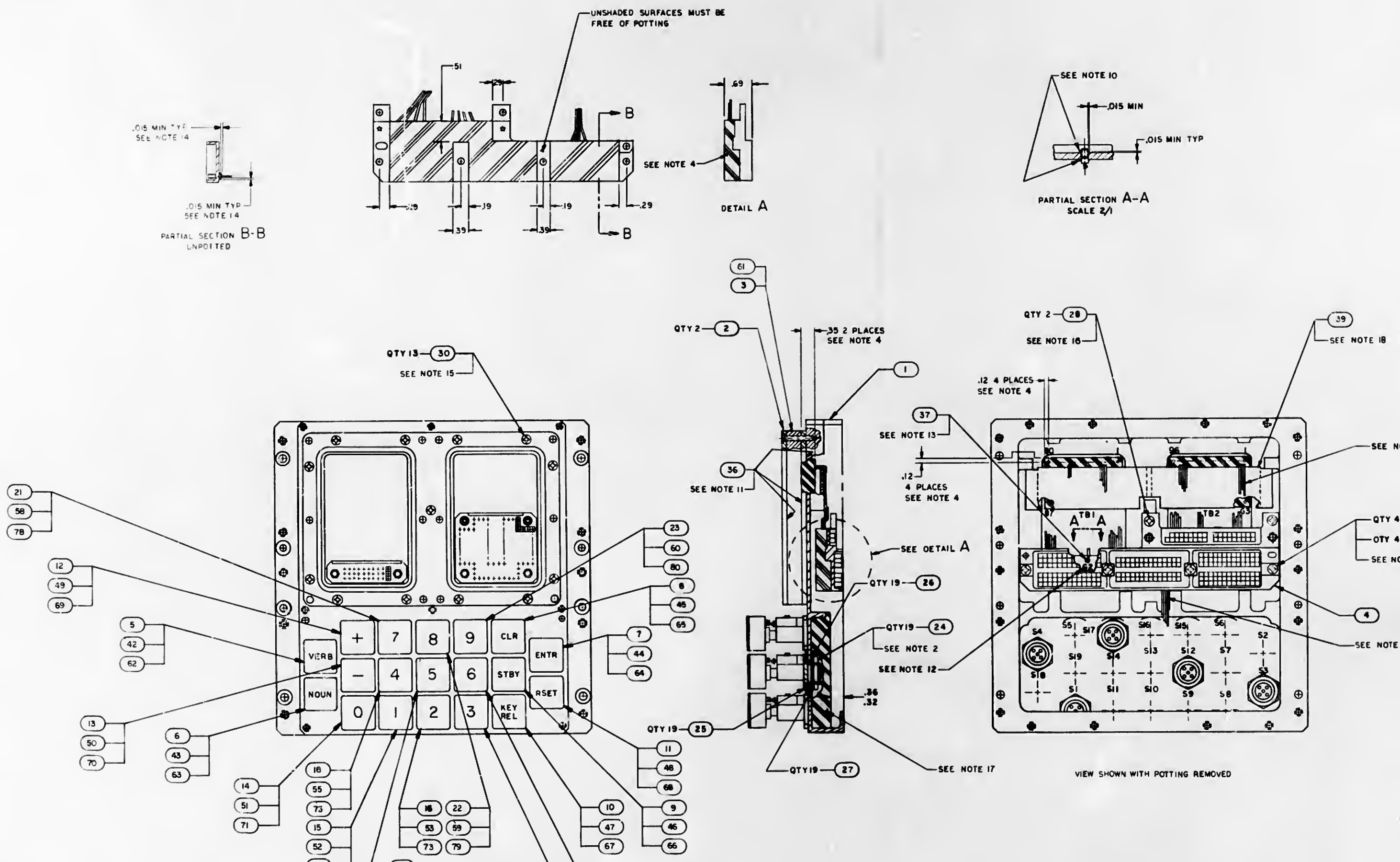
HEADER ASSY
INDICATOR DRIVER MODULE
AGC DSKY

CODE IDENT NO.	SIZE	DRAWING NO.
80230	D	2003907

SCALE 2/1 SHEET 1 OF 1

2003949 G

REV	ZONE	DESCRIPTION
A		REVISED PER TDRR 26856
B		REVISED PER TDRR 27913
C		REVISED PER TDRR 28178
D		REVISED PER TDRR 29705
E		REVISED PER TDRR 32580
F		REVISED PER TDRR [illegible]
G		REVISED PER TDRR 34492



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32, 33, 38, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO. 37 TO FIND NO. 1 PER ND1002004 TYPE VI
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002187 TYPE III
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002225, EXCEPT CURE AT 155±5°F FOR 2 HOURS MINIMUM
18. BOND FIND NO. 39 TO FIND NO. 1 PER ND1002004, TYPE IV
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO. 1 PER ND1002009, METHOD C
20. THIS ASSEMBLY NOT TO EXCEED 160°F IN MANUFACTURING PROCESS

QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	—	—	2003894-211	SWITCH ASSEMBLY, PUSHBUTTON	80
1	—	—	-191		[illegible]
1	—	—	-181		78
1	—	—	-171		[illegible]
1	—	—	-161		[illegible]
1	—	—	-151		[illegible]
1	—	—	-141		[illegible]
1	—	—	-131		[illegible]
1	—	—	-121		[illegible]
1	—	—	-111		[illegible]
1	—	—	-091		[illegible]
1	—	—	-081		69
1	—	—	-071		68
1	—	—	-061		67
1	—	—	-051		66
1	—	—	-041		65
1	—	—	-031		64
1	—	—	-021		63
1	—	—	2003894-011	SWITCH ASSEMBLY, PUSHBUTTON	62
—	1	—	2003864-011	ADAPTER PLATE ASSEMBLY	[illegible]
—	1	—	2003675-211	SWITCH ASSEMBLY, PUSHBUTTON	[illegible]
—	1	—	-191		[illegible]
—	1	—	-181		[illegible]
—	1	—	-171		[illegible]
—	1	—	-161		[illegible]
—	1	—	-151		[illegible]
—	1	—	-141		[illegible]
—	1	—	-131		[illegible]
—	1	—	-121		[illegible]
—	1	—	-111		[illegible]
—	1	—	-091		[illegible]
—	1	—	-081		[illegible]
—	1	—	-071		[illegible]
—	1	—	-061		[illegible]
—	1	—	-051		46
—	1	—	-041		45
—	1	—	-031		44
—	1	—	-021		43
—	1	—	2003875-011	SWITCH ASSEMBLY, PUSHBUTTON	[illegible]
X	X	X	2005953	INTERCONNECTING DIAGRAM	REF
AR	AR	AR	1010807-22	WIRE, INSULATED	[illegible]
AR	AR	AR	1010416-14	WIRE, INSULATED	40
1	1	1	2004898	SUPPORT, WIRE	[illegible]
AR	AR	AR	1010416-13	WIRE, INSULATED	[illegible]
1	1	1	2004039	TERMINAL, THREADED	37
AR	AR	AR	1006879	SILICONE COMPOUND	36
AR	AR	AR	1010416-15	WIRE, INSULATED	[illegible]
AR	AR	AR	1012507-003	TAPE, LACING	[illegible]
AR	AR	AR	1010416-20	WIRE, INSULATED	[illegible]
AR	AR	AR	1010848-1	WIRE, INSULATED	[illegible]
4	4	4	NAS620-6L	WASHER, FLAT	[illegible]
13	13	13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	[illegible]
4	4	4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	[illegible]
2	2	2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	[illegible]
19	19	19	1010635-003	WASHER, LOCK	27
19	19	19	2004940-001	WASHER, PLAIN	[illegible]
19	19	19	1000159-18	O RING SEAL	[illegible]
19	19	19	2004942	NUT, HEX	[illegible]
—	—	1	2003984-211	SWITCH ASSEMBLY, PUSHBUTTON	[illegible]
—	—	1	-191		22
—	—	1	-181		[illegible]
—	—	1	-171		[illegible]
—	—	1	-161		[illegible]
—	—	1	-151		[illegible]
—	—	1	-141		[illegible]
—	—	1	-131		[illegible]
—	—	1	-121		[illegible]
—	—	1	-111		[illegible]
—	—	1	-091		[illegible]
—	—	1	-081		[illegible]
—	—	1	-071		[illegible]
—	—	1	-061		[illegible]
—	—	1	-051		9
—	—	1	-041		[illegible]
—	—	1	-031		[illegible]
—	—	1	-021		[illegible]
—	—	1	2003984-011	SWITCH ASSEMBLY, PUSHBUTTON	[illegible]
1		1	2003948-011	CONNECTOR, PLATE ASSEMBLY	[illegible]
1	—	1	2003959-011	ADAPTER, PLATE ASSEMBLY	[illegible]
2	2	2	1006351	GASKET, PREFORMED	[illegible]
1		1	2004968-021	HOUSING, FRONT	[illegible]

LIST OF MATERIALS

NEXT ASSY	USED ON
2003994	
2003950	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS.

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC
A. G. [illegible]

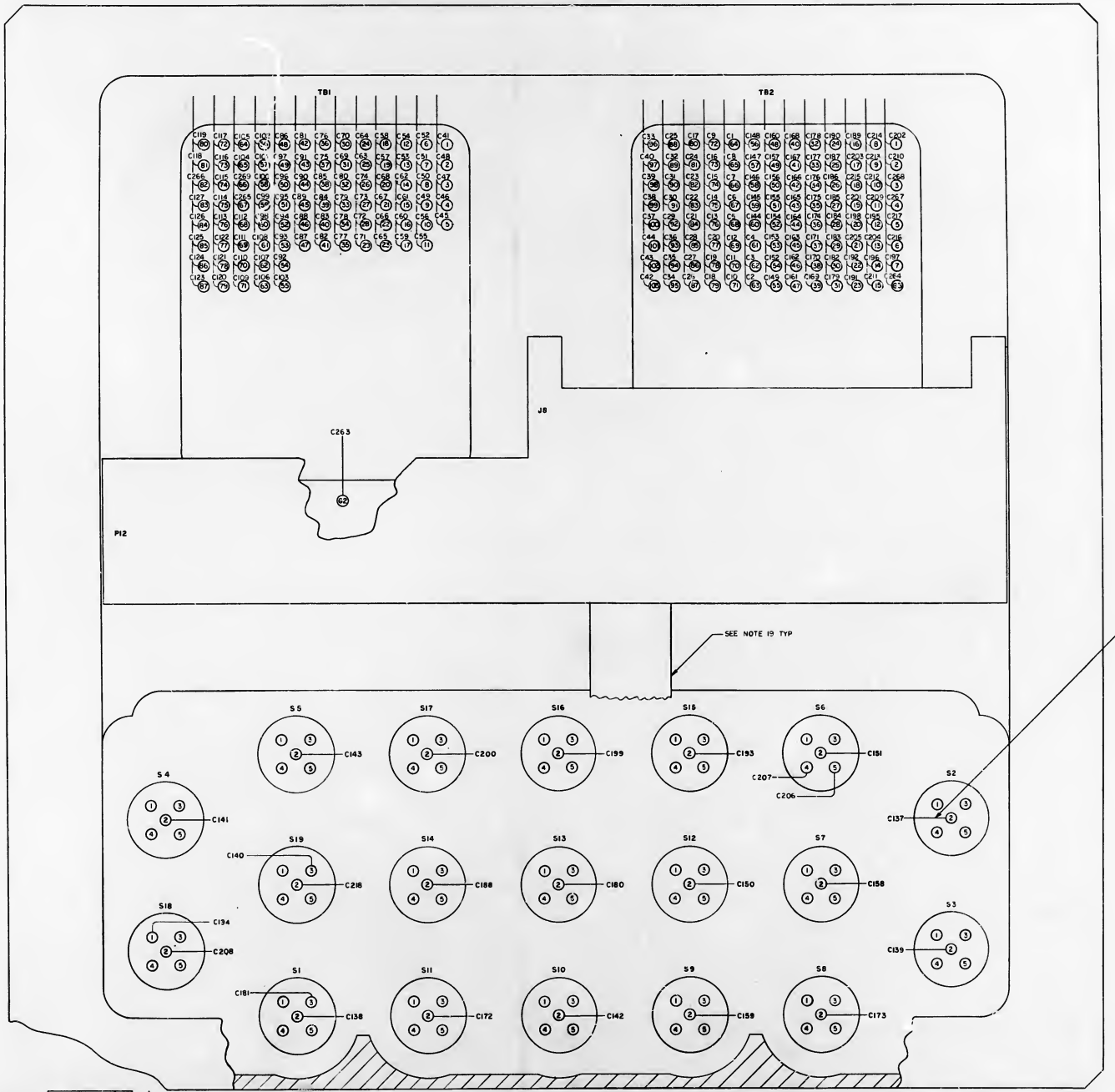
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003949

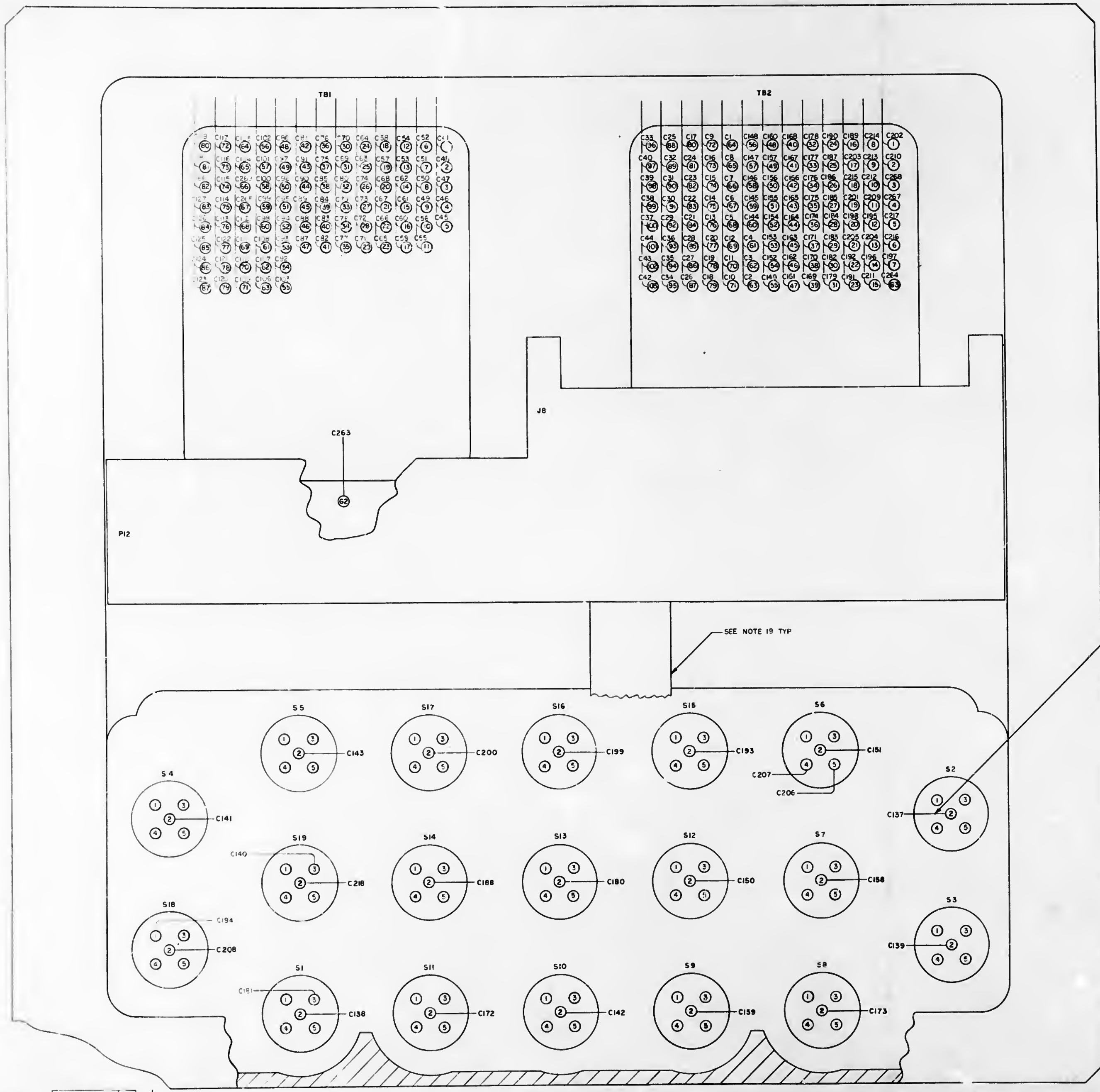
SCALE 1/1 SHEET 1 OF 3

2003949 G


TB1
TB2
J8
P12
C263
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S1
SEE NOTE 19 TYP
SEE NOTE 9

2003949 G

SYM	ZONE	DESCRIPTION
A		REVISED PER TCRR 26856
B		REVISED PER TDRR 27913
C		REVISED PER TDRR 28173
D		REVISED PER TDRR 29705
E		REVISED PER TDRR 32...
F		REVISED PER TDRR 33940
G		REVISED PER TDRR 34492



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY	USED ON
APPLICATION	

LIST OF MATERIALS

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN / CHECKED / APPROVED / APPROVED

APPROVED MIT — A. C. METZGER

APPROVED MSC

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003949

SCALE NONE — SHEET 2 OF 3

2003949 G

E605002

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-127					TB2-68	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-17	
C58		-74					TB1-16	
C59		-75					TB1-15	
C60		-76					TB1-14	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-55	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		55-4	38	RED			S19-4	
C130		55-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190	SEE NOTE 6	-174					-24	SEE NOTE 6
C191		-175					-23	
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-183	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S9-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S16-1	35	YELL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S2-4	
C247		S9-5	40	ORN			S2-5	
C248		S2-4	38	RED			S5-4	
C249		S2-5	40	ORN			S5-5	
C250		S15-4	38	RED			S6-4	
C251		S5-5	40	ORN			S6-5	
C252		S6-4	38	RED			S3-4	
C253		S6-5	40	ORN			S3-5	
C254		S13-4	38	RED			S10-4	
C255		S3-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S16-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-15	32	WHT	26	AR	TB1-66	

2003949 G

2003949 G

LTR	REVISION	DATE	APPROVED
C	REVISED PER TDRR 26856		
D	REVISED PER TDRR 27913		
E	REVISED PER TDRR 28178		
F	REVISED PER TDRR 29765		
G	REVISED PER TDRR 32480		
H	REVISED PER TDRR 34394		
J	REVISED PER TDRR 34492		

ELECTRICAL

FIND NO.	SIZE AWG	LENGTH	TO	REMARKS
32	26	AR	TB1-64	
"	"	"	TB2-63	
			TB2-62	
			TB2-61	
			TB1-66	
			TB2-67	
			TB2-66	
			TB2-65	
			TB2-72	
			TB2-71	
			TB2-70	
			TB2-69	
			TB1-76	
			TB2-75	
			TB2-74	
			TB2-73	
			TB2-80	
			TB1-78	
			TB1-77	
			TB2-84	
			TB2-83	
			TB2-82	
			TB2-81	
			TB1-89	
			TB2-87	
			TB2-86	
			TB2-85	
			TB1-92	
			TB2-91	
			TB2-90	
			TB2-89	
			TB1-95	
			TB2-94	
			TB2-93	
			TB2-100	
			TB2-99	
			TB2-98	
			TB2-97	
			TB1-1	
			TB2-103	
			TB2-102	
			TB2-101	SEE NOTE 6
			TB1-5	
			TB1-4	
			TB1-3	
			TB1-2	
			TB1-9	
			TB1-8	
			TB1-7	
			TB1-6	
			TB1-13	
			TB1-12	
			TB1-11	
			TB1-10	
			TB1-19	
			TB1-18	
			TB1-17	
			TB1-16	
			TB1-15	
			TB1-14	
			TB1-25	
			TB 24	
			TB1 23	
			TB1-22	
			TB1-21	
			TB1-20	
			TB1-31	
			TB1-30	
			TB1-29	
			TB1-28	
			TB1-27	
			TB1-26	
			TB1 35	
			TB1-34	
			TB1-33	
			TB1 32	
			TB1 42	
			TB1-41	
			TB1-40	
			TB1-39	
			TB1 38	
			TB1-48	
			TB1-47	
32	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1 45	
C90		" -47	"	"	"	"	TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-71	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		" -5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		" -5	"	"			S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		" -11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		" -136	"				TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		" -139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		" -142	"				TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		" -145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		" -148	"				" -47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		" -157					" -38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

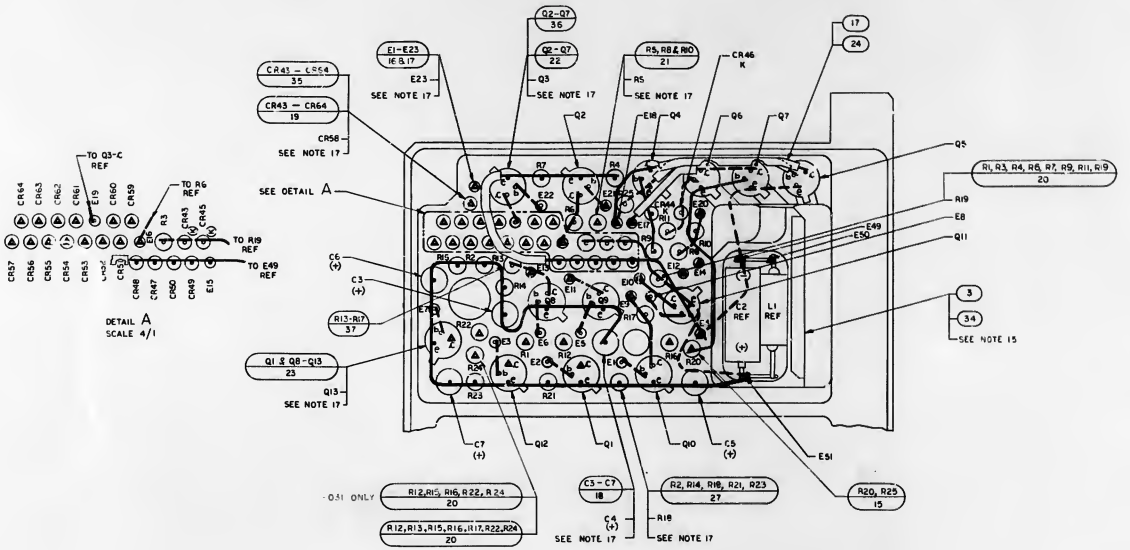
LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32	"	"	"	TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		" -166	"				" -29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		" -169					" -26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		" -174	"				" -24	
C191	SEE NOTE 6	" -175					" -23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S16-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	" -192	"				" -14	SEE NOTE 6
C197		" -204					" -7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		" -210	"				" -1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					" -13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	" -193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		" -209	"	"			" -2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					" -6	
C217		" -208	32	WHT			TB2- 5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S1-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S2-4	
C247		S9-5	40	ORN			S2-5	
C248		S2-4	38	RED			S15-4	
C249		S2-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			J8-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				61	SEE NOTE 5
C265		J8-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

MASTER

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN μf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE MASS.	MANNED SPACECRAFT CENTER HOUSTON TEXAS
MATERIAL	DRAWN CHECKED APPROVED APPROVED	FRONT HOUSING ASSEMBLY ACC DSKY
NEXT ASSY USED ON APPLICATION	APPROVED MIT APPROVED MSC	SIZE B 80230 J 2003949

2003949

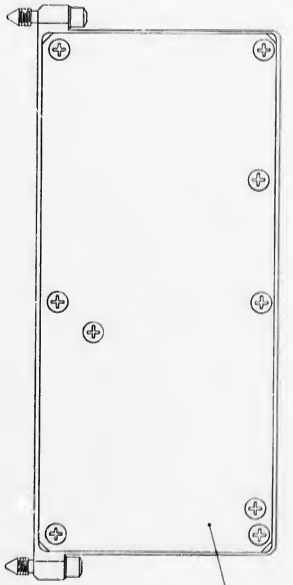


DETAIL A
SCALE 4/1

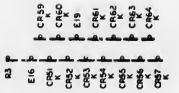
VIEW A-A
SCALE 4/1
VIEW SHOWN WITH FIND NO. 4, 12, 13, 14 AND SPECIAL LEVEL WIRING REMOVED

WIRING LEGEND

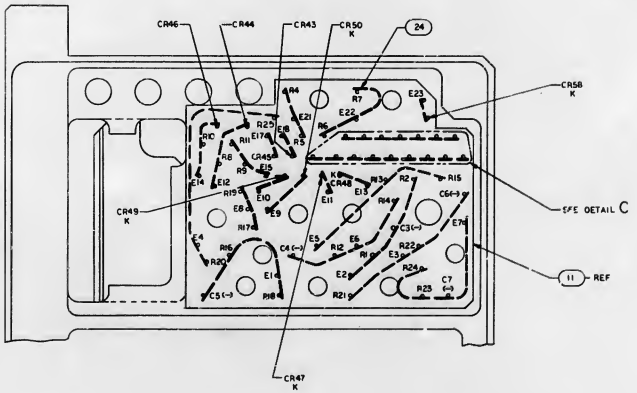
FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT
1	K21-7	26	E29	51	E34	76	K19-9
2	K21-2	27	K16-5	52	K18-10	77	E44
3	K22-7	28	K16-1	53	K13-8	78	K15-8
4	K22-1	29	K12-7	54	K8-8	79	K20-8
5	K22-6	30	K2-7	55	K3-8	80	K20-9
6	K22-4	31	K17-6	56	K3-7	81	K20-10
7	K21-1	32	E30	57	E35	82	K20-11
8	K21-8	33	K17-10	58	K18-4	83	K5-8
9	E24	34	K12-8	59	K19-11	84	K5-9
10	K21-3	35	E31	60	K18-8	85	K22-8
11	K21-4	36	K7-7	61	E37	86	R24
12	K21-5	37	K17-4	62	E36	87	K12-9
13	E27	38	K17-8	63	K19-6	88	E45
14	E26	39	K2-8	64	K18-2	89	R16
15	K16-7	40	K7-8	65	E40	90	R12
16	E25	41	K2-4	66	E39	91	R1
17	K11-8	42	K7-4	67	E38	92	Q1
18	K16-8	43	K12-4	68	G1	93	Q12
19	K16-10	44	E32	69	E42	94	CR57
20	K16-6	45	K18-6	70	K19-8	95	K13-9
21	K16-4	46	K18-7	71	E41	96	R13
22	K11-8	47	E33	72	K19-10	97	K13-10
23	E28	48	K17-1	73	E43	98	K14-8
24	K6-8	49	K8-7	74	K20-7	99	K15-9
25	K17-7	50	K13-7	75	K19-11	100	K15-10



QTY 3
QTY 12
APPLICABLE DASH NO



DETAIL C
SCALE 4/1

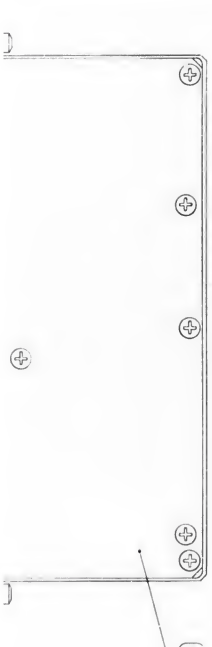


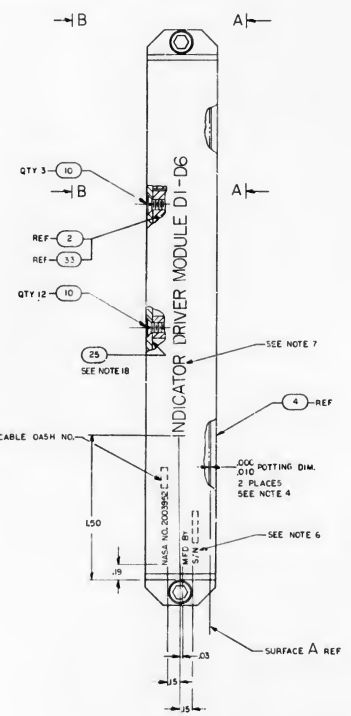
VIEW B-B
SCALE 4/1
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

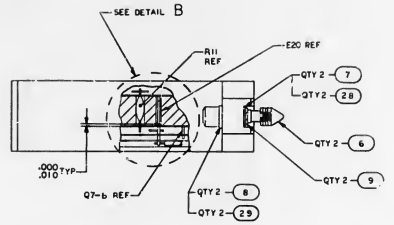
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. WELD PER ND1002005
3. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. ENCAPSULATE PER ND1002236, EXCEPT VISUAL INSPECTION CRITERIA IN LIEU OF 4.3.1 TO BE AS FOLLOWS: THE POTTING COMPOUND SHALL NOT CONTAIN VOIDS OR BUBBLES AT OR BELOW THE SURFACE WHICH ARE LARGER THAN 1/4 INCH IN DIAMETER, OR AN AGGLOMERATION OF VOIDS OR BUBBLES LARGER THEN 1/8 INCH IN DIAMETER & A MINIMUM OF .050 INCH OR 75% OF THE DISTANCE, WHICHEVER IS LARGER, ACCUMULATIVE TOTAL OF CLEAR (VOID FREE) POTTING SHALL BE PRESENT BETWEEN ELECTRICAL CONTACTS, COMPONENTS, AND THE EXTERIOR SURFACE OF THE ENCAPSULANT
5. K DENOTES CATHODE SIDE OF DIODE
6. MARK 09/07 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122 TYPE II, CLASS 2 & SERIALIZE PER ND1002023 USING INK 1006271-1
7. MARK 18/20 HIGH WHITE CHARACTERS PER ND1002019 & ND1002122 TYPE II, CLASS 2 USING INK 1006271-1
8. AR DENOTES AS REQUIRED
9. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
10. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
11. ▲ AND CLEAR LEADS INDICATE SPECIAL LEVEL WIRING
12. — DENOTES NEGATIVE SIDE OF CAPACITOR
13. + DENOTES POSITIVE SIDE OF CAPACITOR
14. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
15. BOND FIND NO. 3 OR 34 TO FIND NO. 1 PER ND1002004 TYPE III
16. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH & SHALL MEET ALL THE REQUIREMENTS OF P.S. 2003952 FOR -011 AND -021 CONFIGURATION, FOR -031 CONFIGURATION USE PS2016009
17. STAKE FIND 15, 17 THRU 23, 27, 35, 36 AND 37 TO FIND NO. 1 PER ND1002009 METHOD C OR D
18. APPLY FIND NO. 25 TO INDICATED SURFACES SO AS TO ESTABLISH A CONTINUOUS THERMAL CONTACT BETWEEN SAME
19. SEAL INSULATORS ON FIND NO. 1 AND COAT LEADS THAT EXTEND THROUGH FIND NO. 14 AND FIND NO. 26 PER ND1002004 TYPE VI
20. COLOR OF FIND NO. 32 TO BE OPTIONAL

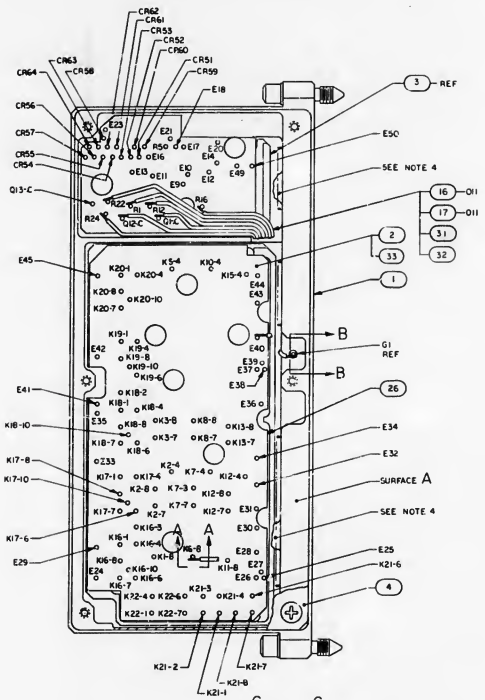
WIRING LEGEND

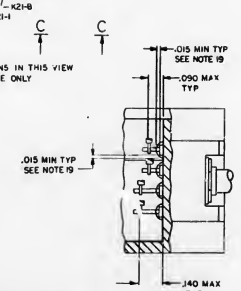
FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT	FROM PIN NO.	TO COMPONENT
1	K21-7	26	E29	51	E34	76	K19-4	101	E10
2	K21-2	27	K16-3	52	K16-10	77	E44	102	E11
3	K22-7	28	K16-1	53	K13-8	78	K15-4	103	E9
4	K22-1	29	K12-7	54	K8-8	79	K20-8	104	E13
5	K22-6	30	K2-7	55	K3-8	80	K20-10	105	E49
6	K22-4	31	K17-6	56	K3-7	81	K20-1	106	E14
7	K21-1	32	E30	57	E35	82	K20-4	107	E12
8	K21-8	33	K17-10	58	K18-4	83	K5-4	108	CR52
9	E24	34	K12-8	59	K18-1	84	K10-4	109	CR60
10	K21-5	35	E31	60	K18-8	85	R22	110	CR51
11	K21-4	36	K7-7	61	E37	86	R24	111	E16
12	K21-6	37	K17-4	62	E36	87	Q12-C	112	E50
13	E27	38	K17-8	63	K19-4	88	E45	113	E17
14	E26	39	K2-8	64	K18-2	89	R16	114	E18
15	K16-7	40	K7-8	65	E40	90	R12	115	R5
16	E25	41	K2-4	66	E39	91	R1	116	CR59
17	K11-8	42	K7-4	67	E38	92	Q1-C	117	CR62
18	K16-8	43	K12-4	68	G1	93	SPARE	118	CR61
19	K16-10	44	E32	69	E42	94	CR57	119	E21
20	K16-6	45	K18-6	70	K19-8	95	Q13-C	120	E20
21	K16-4	46	K18-7	71	E41	96	SPARE	121	E23
22	K1-R	47	E33	72	K19-10	97	CR53	122	CR64
23	E28	48	K17-1	73	E43	98	CR54	123	CR58
24	K16-8	49	K8-7	74	K20-7	99	CR55	124	CR63
25	K17-7	50	K13-7	75	K19-1	100	CR56		





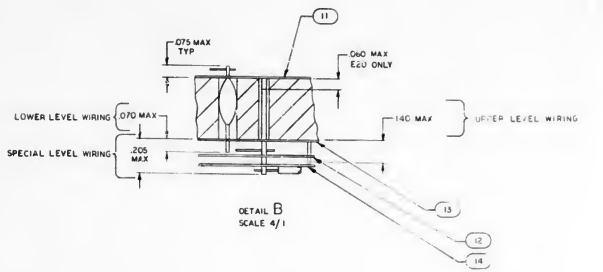




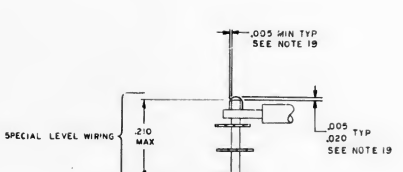


COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY

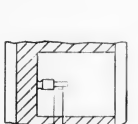
PARTIAL VIEW C-C
SCALE 4/1



DETAIL B
SCALE 4/1



PARTIAL SECTION A-A
TYPICAL FOR PINS OF FINO NO.2
SCALE 10/1



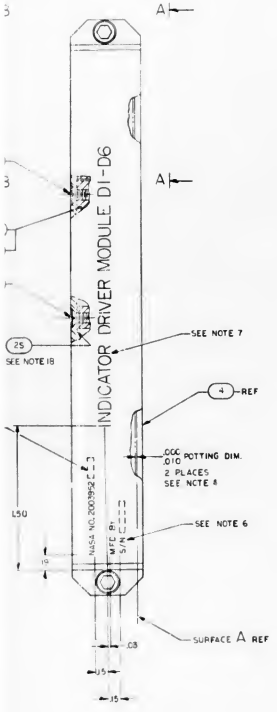
SECTION B-B
SCALE 4/1

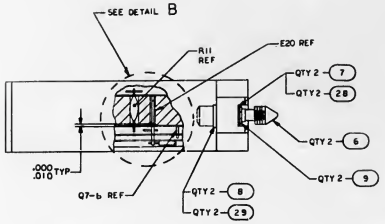
F-2/3

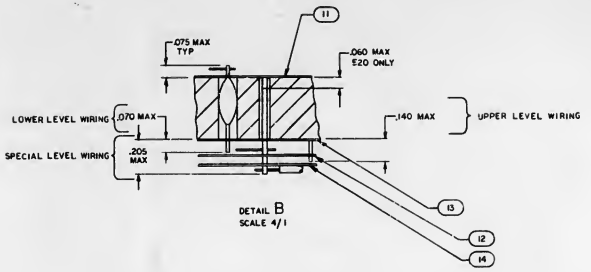
2003952 F

2003950		
2003985		
NEXT ASSY	USED ON	
APPLICATION		

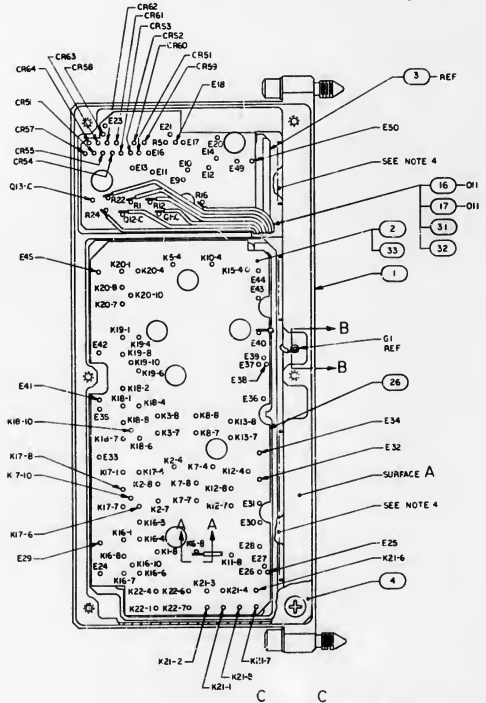
FROM PIN NO.	TO COMPONENT
101	E10
102	E11
103	E9
104	E13
105	E49
106	E14
107	E12
108	CR52
109	CR60
110	CR51
111	E18
112	E50
113	E17
114	E16
115	R5
116	CR59
117	CR62
118	CR61
119	E2
120	E20
121	E23
122	CR64
123	CR58
124	CR63



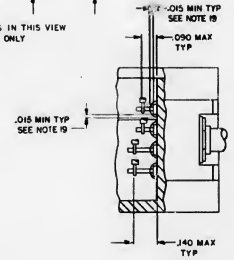




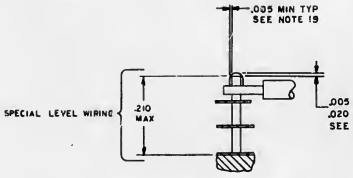
DETAIL B
SCALE 4/1



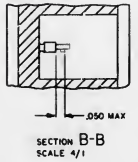
COMPONENT DESIGNATIONS IN THIS VIEW ARE FOR REFERENCE ONLY



PARTIAL VIEW C-C
SCALE 4/1



PARTIAL SECTION A-A
TYPICAL FOR PINS OF FIND NO.2
SCALE 10/1



SECTION B-B
SCALE 4/1

	—	—	2005940	SCHEMATIC	REF
	—	—	2005952	SCHEMATIC	REF
	2	—	1006750-C	RESISTOR, FIXED FILM	37
	6	—	2004184-005	TRANSISTOR, POTTED	36
	22	—	2004183-001	DIODE	35
	1	—	2003908-021	DECODING CIRCUIT ASSY	34
	1	—	2003910-021	RELAY CIRCUIT ASSY	33
SEE NOTE 20	AR	AR	1006776	SLEEVING, INSULATING AWG 26	32
	AR	AR	1006757-27	WIRE, ELECTRICAL 26 AWG DIA	31
	AR	—	1010848-1	WIRE, INSULATED	30
	2	2	2004984-001	WASHER, FLAT	29
	2	2	2004984-003	WASHER, FLAT	28
	5	5	1006750-39	RESISTOR, FIXED FILM	27
	1	1	2004917	INSULATOR	26
	AR	AR	1006879	COMPOUND, SILICONE THERMOCONDUCTIVE	25
	AR	AR	1006757-1	WIRE, ELECTRICAL 26 AWG DIA	24
	7	7	2004004-002	TRANSISTOR	23
	—	6	2004004-001	TRANSISTOR	22
	3	3	1006750-62	RESISTOR, FIXED FILM	21
	15	15	1006750-56	RESISTOR, FIXED FILM	20
	—	22	2004103-001	SEMICONDUCTOR DEVICE, DIODE	19
	5	5	1006755-106	CAPACITOR, FIXED	18
	AR	AR	1006776-22	SLEEVING, INSULATION	17
	AR	AR	1006757-8	WIRE, ELECTRICAL 26 AWG DIA	16
	2	2	1006750-32	RESISTOR, FIXED FILM	15
	1	1	2004993	INSULATOR, PHOTOMASTER, SPECIAL LEVEL	14
	1	1	2004992-011	INSULATOR, PHOTOMASTER, LOWER LEVEL	13
	1	1	2004991	INSULATOR, PHOTOMASTER, UPPER LEVEL	12
	1	1	2004993-011	INSULATOR, PHOTOMASTER, REAR	11
	15	15	MS24693-C2	SCREW, FLAT HD, CROSS RECESSED	10
	2	2	MS16633-4015	RING, RETAINING, EXTERNAL	9
	—	2	1004546-1	WASHER, FLAT	8
	—	2	1004546-3	WASHER, FLAT	7
	2	2	1004579-1	SCREW, JACKING	6
	1	1	2004956	COVER, REAR	5
	1	1	2004911	COVER	4
	—	1	2003905-011	DECODING CIRCUIT ASSY	3
	—	1	2003910-011	RELAY CIRCUIT ASSY	2
	1	1	2003907-011	HEADER ASSY	1
QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

031 021 011 LIST OF MATERIALS

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TORR 25151 DR. CHK. APPD.		
B	REVISED PER TORR 27551 DR. CHK. APPD.		
C	REVISED PER TORR 28817 DR. CHK. APPD.		
D	REVISED PER TORR 29738 DR. CHK. APPD.		
E	REVISED PER TORR 32651 DR. CHK. APPD.		
F	REVISED PER TORR 32981 DR. CHK. APPD.		

2003962 F

2003994		
2003950		
2003985		
NEXT ASSY	USED ON	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON FRACTIONS ±, DECIMALS ±.02, ANGLES ±. DO NOT SCALE THIS DRAWING. MATERIAL. HEAT TREATMENT. FINAL FINISH.

MIT INSTRUMENTATION LAB CAMBRIDGE MASS.

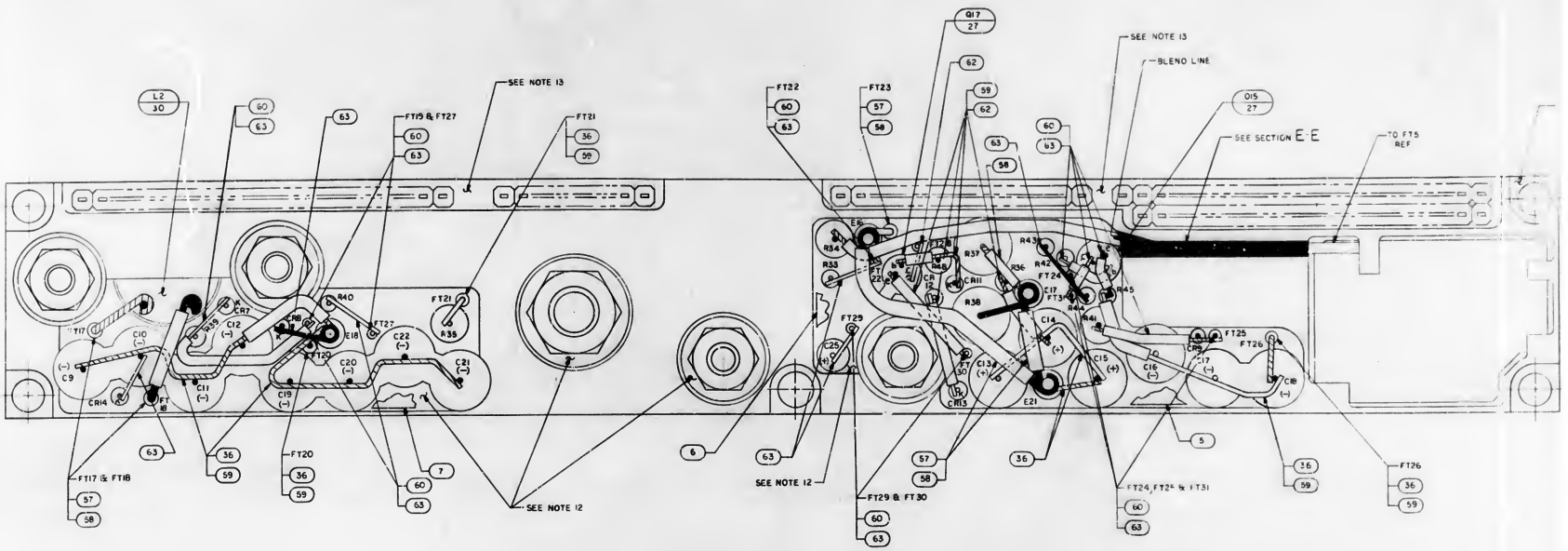
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

INDICATOR DRIVER ASSY MODULE DI-D6 AGC DSKY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003952

SCALE 2/1 | WT | SHEET 1 OF 1

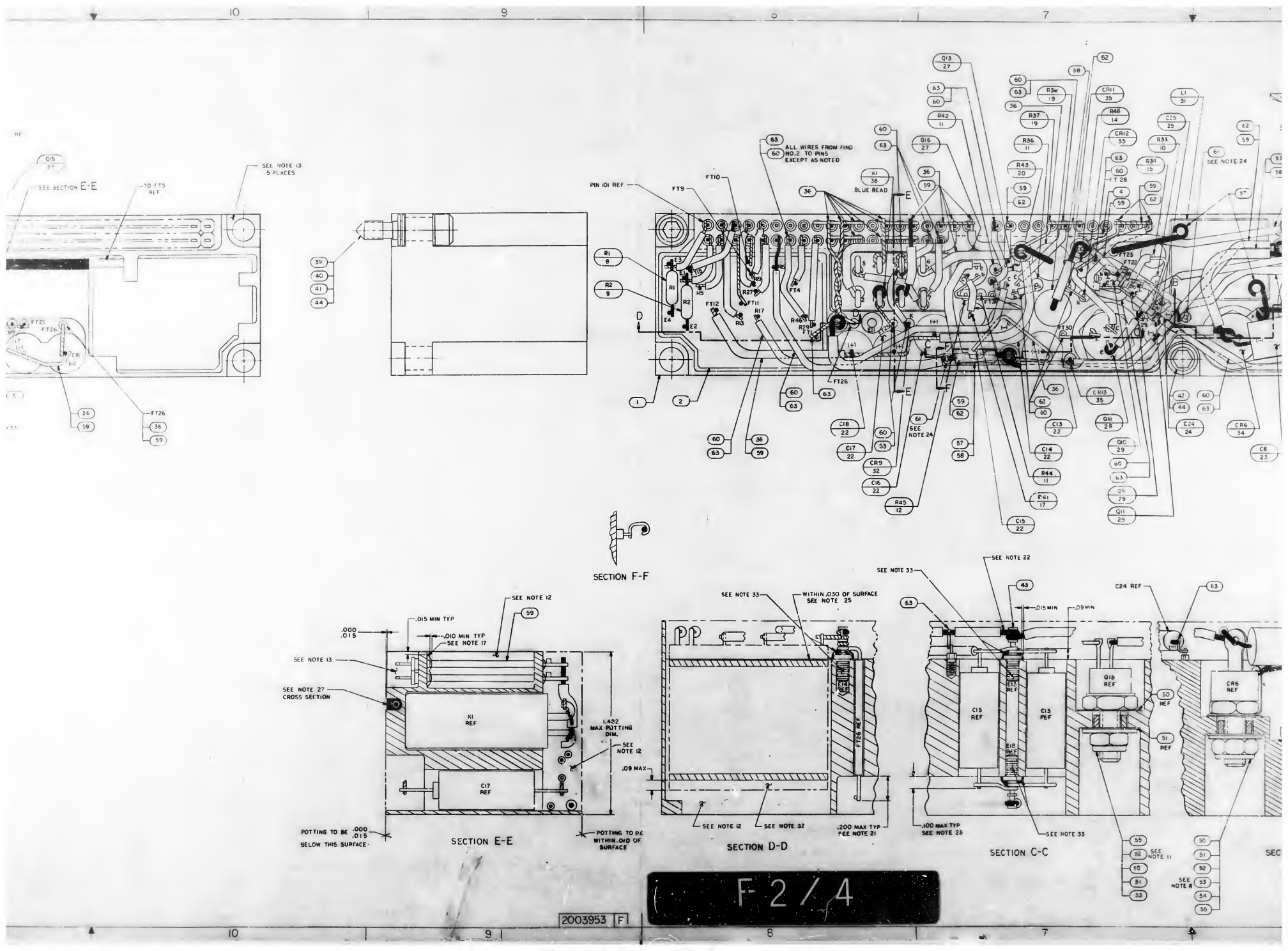
2003952 F

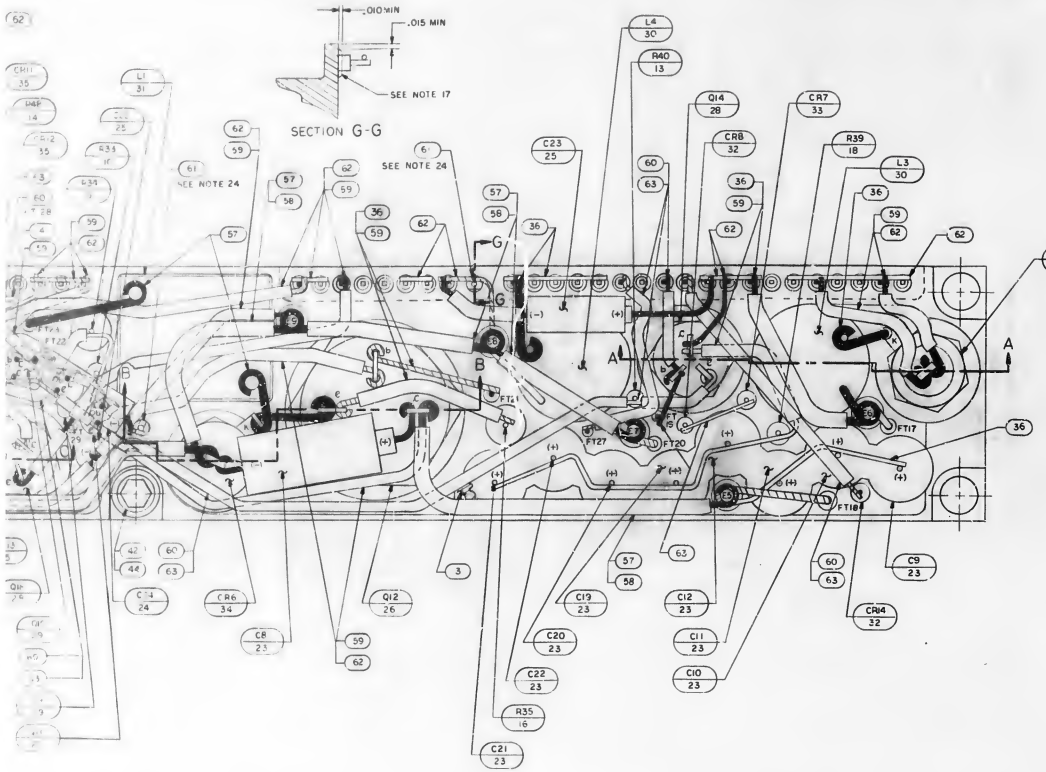


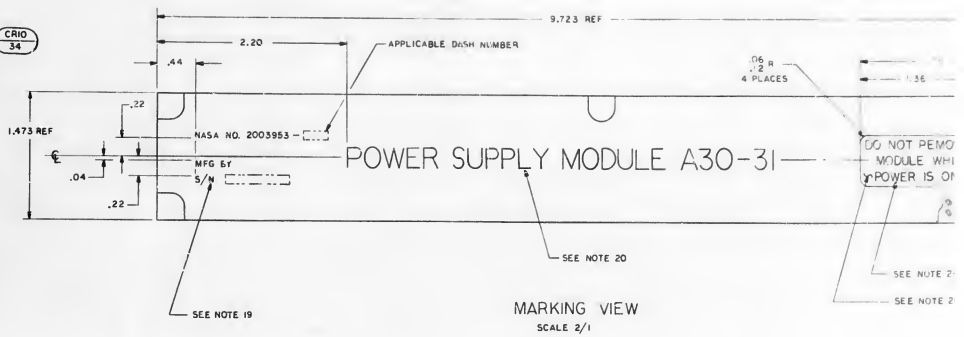
NOTES

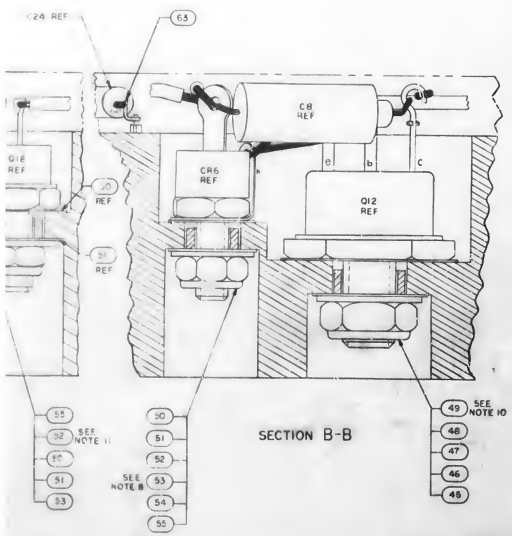
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-1000
2. WELD PER ND1002009
3. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
4. SOLDER PER ND1002071 USING SOLDER COMP SN60 FORM WIRE SOLID PER ND1002075 EXCEPT AS SHOWN
5. K DENOTES CATHODE SIDE OF DIODE
6. AR DENOTES AS REQUIRED
7. APPLY SILICONE GREASE, 1006879, TO INDICATED AREAS OF CR6, CR10 Q12, Q14 AND Q18
8. MOUNTING TORQUE FOR CR6 AND CR10 TO BE 25/30 INCH POUNDS
9. FIND NO. 56 TO COVER SOLDER JOINT OF FIND NO. 36 AND FIND NO. 54
10. MOUNTING TORQUE FOR Q12 TO BE 15/30 INCH POUNDS
11. MOUNTING TORQUE FOR Q14 AND Q18 TO BE 13/15 INCH POUNDS
12. ENCAPSULATE PER ND1002002. REMOVE FLASHING
13. INDICATED AREAS TO BE FREE OF ENCAPSULATION
14. STAKE FIND NOS 10 THRU 19, 22, 23, 27, 29 THRU 32 & 38 PER ND1002009 METHOD C OR D
15. FT DENOTES FEED THRU
16. + DENOTES POSITIVE SIDE OF CAPACITOR
17. SEAL INSULATORS, CONTACTS AND FIND NO. 61 TO HEADER PER ND1002004, TYPE VI
18. E DENOTES STAND-OFF
19. MARK .10/.08 HIGH WHITE CHARACTERS PER ND 1002019 AND ND1002122 TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
20. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122 TYPE II, CLASS 2 USING INK 1006271-1
21. BLACK DOT & CROSS HATCHED WIRING INDICATES UPPER LEVEL WIRING
22. BLACK DOT & SOLID BLACK WIRING INDICATES SPECIAL LEVEL WIRING
23. WHITE DOT & CLEAR WIRING INDICATES LOWER LEVEL WIRING
24. MOUNTING TORQUE FOR FIND NO. 61 TO BE 15/20 INCH OUNCES
25. ENCAPSULATE FIND NO. 2 IN FIND NO. 1 TO DIM. SHOWN PER ND1002009, METHOD F
26. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. R1 AND R2 TO BE SELECTED FROM APPROPRIATE CHART
27. STAKE WIRE IN PLACE PER ND1002004, TYPE VII
28. BACKGROUND TO BE RED USING MARKING INK 1006271-9
29. MARK .10/.08 HIGH WHITE PER ND1002019 & ND1002122 TYPE II, CLASS 2, USING INK 1006271-1. CENTRALIZE AS SHOWN
30. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL REQUIREMENTS OF PS 2003953
31. ENCAPSULATE FIND NO. 34 TO FIND NO. 1 PER ND1002009, METHOD F
32. SEAL BOTTOM OF FIND NO. 2 PER ND1002009 METHOD C OR D PRIOR TO ENCAPSULATION PER NOTE 25
33. BOND FIND NO. 43 TO FIND NO. 1 PER ND1002004 TYPE VII

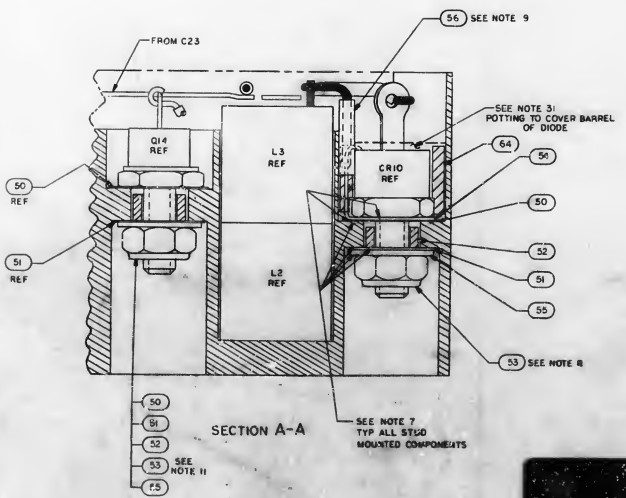
R1 AND R2	
PART NO.	VALUE
1006750-1	51
-2	56
-3	62
-4	68
-5	75
-6	82
-7	91
-8	100
-9	110
-10	120
-11	130
-12	150
-13	160
-14	180
-15	200
-16	220
-17	240
-18	270
-19	300
-20	330
-21	360
-22	390
-23	430
-24	470
1006750-25	510


SEE SECTION E-E
TO FT5 REF
SEE NOTE 13 5 PLACES
ALL WIRES FROM FIND NO.2 TO PINS EXCEPT AS NOTED
PIN 101 REF
BLUE BEAD
SECTION F-F
SEE NOTE 12
.015 MIN TYP
.000 .015
.010 MIN TYP
SEE NOTE 17
SEE NOTE 13
SEE NOTE 27 CROSS SECTION
1.482 MAX POTTING DIM.
SEE NOTE 12
.09 MAX
POTTING TO BE .000 .015 BELOW THIS SURFACE
POTTING TO BE WITHIN .010 OF SURFACE
SECTION E-E
SEE NOTE 33
WITHIN .030 OF SURFACE SEE NOTE 25
SEE NOTE 12
SEE NOTE 32
.200 MAX TYP SEE NOTE 21
SECTION D-D
SEE NOTE 22
C24 REF
.015 MIN
.09 MIN
.100 MAX TYP SEE NOTE 23
SEE NOTE 33
SECTION C-C
SEE NOTE 11
SEE NOTE 8
2003953 F
F 2 / 4







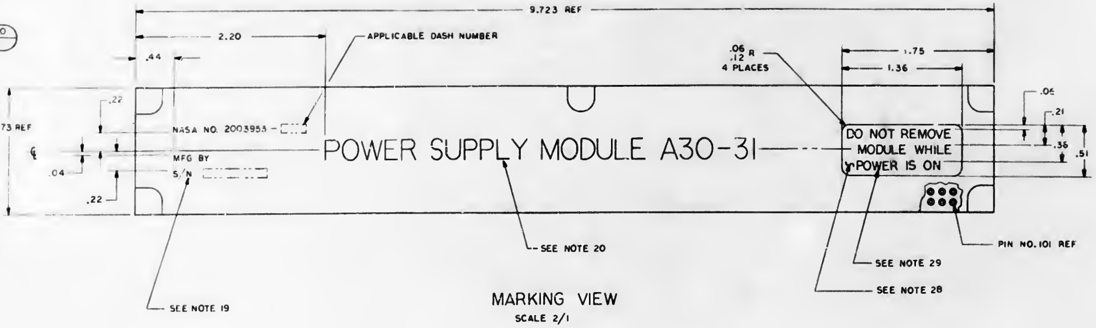


F-3/4

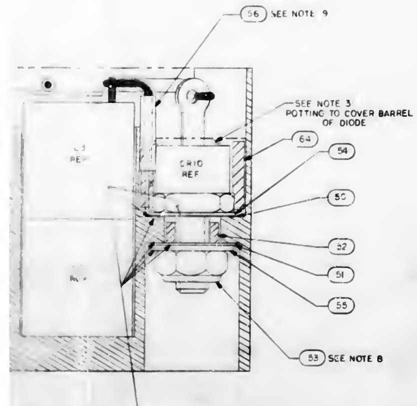
2003953 F

F 2003953

SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 27309 DR CHK APPD		
B	REVISED PER TDRR 28253 DR CHK APPD		
C	REVISED PER TDRR 28623 DR CHK APPD		
D	REVISED PER TDRR 30173 DR CHK APPD		
E	REVISED PER TDRR 30174 DR CHK APPD		
F	REVISED PER TDRR 30414 DR CHK APPD		



MARKING VIEW
SCALE 2/1



SECTION A-A

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
	2005916	SCHEMATIC	REF
1	2004928	SLEEVE, THERMAL	64
AR	1006757-13	WIRE, ELEC	63
AR	1006757-23	WIRF, ELEC	62
3	2004039	TERMINAL, THREADED	61
AR	1006776-22	INSULATION, SLEEVING	60
AR	1006776-20	INSULATION, SLEEVING	59
AR	1006776-18	INSULATION, SLEEVING	58
AR	QQ-W-343, TYPE S, 18	WIRE, ELEC	57
AR	1006776-30	INSULATION, SLEEVING	56
4	1008071-2	WASHER, FLAT	55
2	2008013-5	TERMINAL, LUG	54
4	MS21083B3	NUT, HEX, SELF-LOCKING	53
4	1008025-5	BUSHING, INSULATOR	52
4	1008024-1	WASHER, INSULATOR	51
4	1008024-2	WASHER, INSULATOR	50
1	MS21083B5	NUT, HEX, SELF-LOCKING	49
1	1008071-7	WASHER, FLAT	48
1	2008020-3	BUSHING, INSULATOR	47
1	1008024-5	WASHER, INSULATOR	46
1	1008024-6	WASHER, INSULATOR	45
5	2004984-003	WASHER, FLAT	44
14	1006708	TERMINAL, STUD	43
1	1004722-2	SCREW, CAPTIVE	42
4	MS16633-4015	RING, RETAINING, EXTERNAL "E"	41
4	2004984-001	WASHER, FLAT	40
4	1004579-1	SCREW, JACKING	39
1	1006304-003	RELAY	38
AR	[illegible]	[illegible]	37
AR	1006757-21	WIRE, ELEC	36
1	2004897	SELECTION LIST	35
2	1006329	DIODE	34
1	2004112-001	DIODE	33
3	2004103-001	DIODE	32
1	1006328	INDUCTOR	31
3	1006327	INDUCTOR	30
3	2004004-002	TRANSISTOR, POTTED	29
2	1006363-001	TRANSISTOR	28
4	2004004-001	TRANSISTOR, POTTED	27
1	1006317-001	TRANSISTOR	26
2	1006755-126	CAPACITOR	25
1	1006755-79		24
9	1006755-134		23
6	1006755-89	CAPACITOR	22
1	[illegible]	RESISTOR	21
1	1006750-49	RESISTOR	20
2	1006330-001		19
1	1010604-50		18
1	1010389-23		17
1	1010389-113		16
1	1010389-51		15
1	1006760-32		14
1	1006750-43		13
1	1006750-39		12
3	1006750-15		11
1	1006750-1		10
1	SEE NOTE 26		9
1	SEE NOTE 26	RESISTOR	8
1	2004892	INSULATOR D	7
1	2004890-002	INSULATOR C	6
1	2004890-001	INSULATOR C	5
1	2004889	INSULATOR B	4
1	2004893	INSULATOR A	3
1	2003029-021	CONTROL CIRCUIT SUB ASSY	2
1	2003057-021	HEADER HOUSING ASSY	1

O11 LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

2003420 NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS
DRAWN / CHECKED / APPROVAL / APPROVAL
NASA APPROVAL A. C. METZGER

MANNED SPACECRAFT CENTER HOUSTON TEXAS

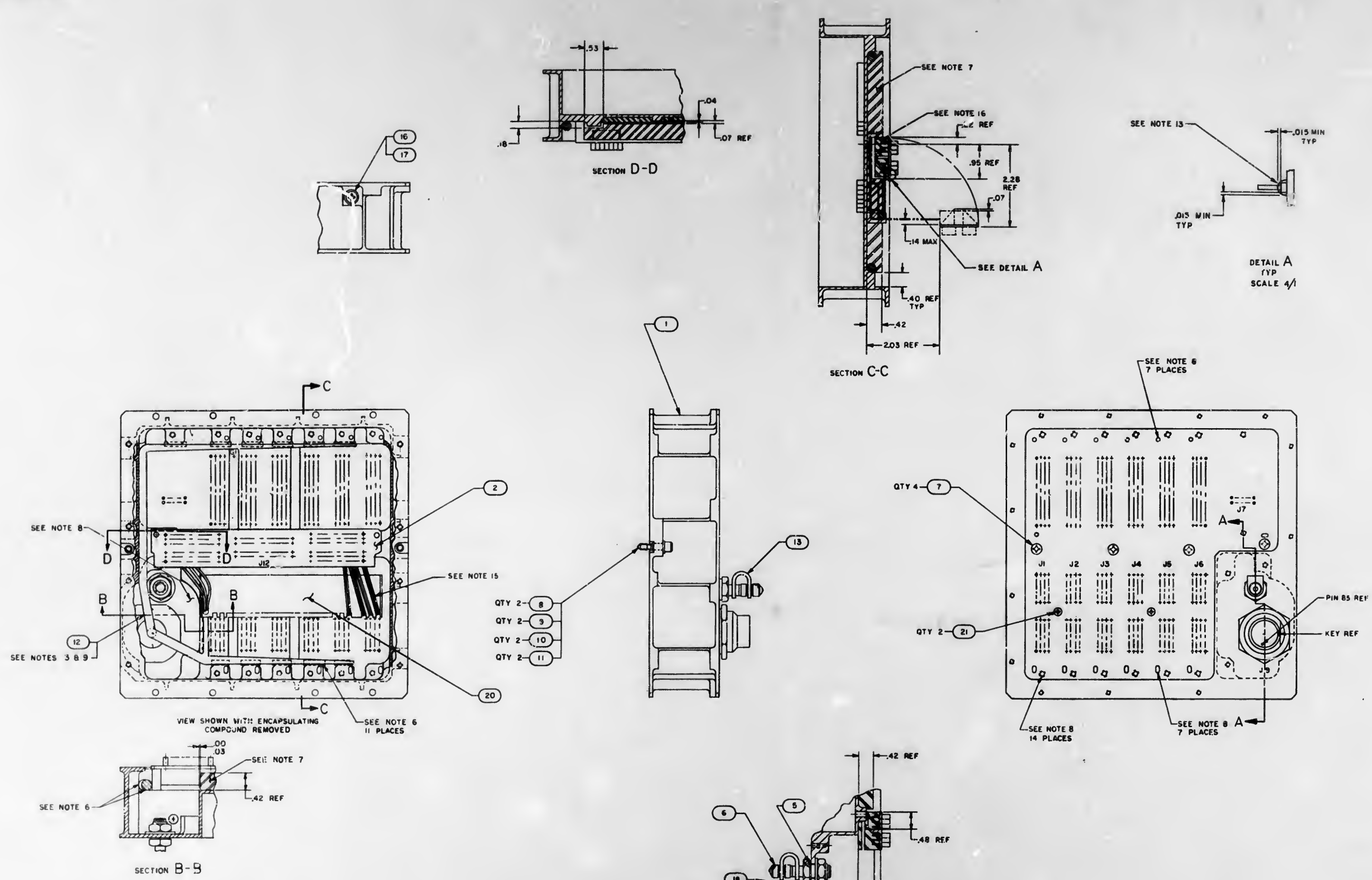
POWER SUPPLY MODULE A30 - 31 ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003953
SCALE 2/1 | WT | SHEET 2 OF 2

MASTER

2003953 F

2003955 B



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-?-70327
2. IDENTIFY WITH PART NO. PER ND1002019
3. SOLDER LEADS OF FIND NO. 12 PER ND1002071 USING SOLDER PER ND1002075
4. MOUNTING TORQUE FOR FIND NO. 3 TO BE 10 TO 11 FT-LBS
5. AR DENOTES AS REQUIRED
6. BOND FIND NO. 12 TO FIND NO. 1 PER ND1002009 METHOD C IN AREAS INDICATED
7. ENCAPSULATE INDICATED AREAS PER ND1002295
8. INDICATED AREA AND HOLES TO BE FREE FROM ENCAPSULATING COMPOUND
9. MOUNTING TORQUE FOR CONNECTOR OF FIND NO. 12 TO BE 20 TO 25 FT LBS
10. WIRE USING LEAD ELECTRICAL B PER ND1002031 EXCEPT FIND NO. 15 TO HAVE 5 TO 6 TURNS OF UNINSULATED WIRE, 1/2 TO 1 1/2 TURNS UNINSULATED WIRE, STRIP LENGTH OF 1.18 TO 1.00, AND STRIP FORCE OF 5 LB MIN.
11. INDICATED AREAS TO BE FREE OF WIRES AND ENCAPSULATING COMPOUND TO THE LEVEL OF SURFACE A
12. DISCARD VENDOR SUPPLIED O RING AND REPLACE WITH FIND NO. 22
13. SEAL INSULATORS ON FIND NO. 2 PER ND1002004 TYPE VI
14. ~~COLOR OF FIND NO. 14 TO BE OPTIONAL~~
15. BOND WIRES OF FIND NO. 12 & FIND NO. 14 & 15 TO FIND NO. 20 PER ND1002009 METHOD C
16. ENCAPSULATE PER ND1002236
17. WELD PER ND1002005

QTY REQD	PART OR IDENTIFYING NO.
X	2005953
1	1000159-…
2	MS51959-…
1	2004927
1	1004546-6
1	1010635-0…
1	NAS1598D0…
1	MS51907-…
AR	1010807-2…
AR	10063…
1	2004931
1	2003980-…
2	MS16633-…
2	1004546-3
2	1004546-1
2	1004579-…
4	MS51959-2…
1	2004903
1	1000159-14
1	MS15795-…
1	MS20364D…
1	2003951-…
1	2003947-…

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.01

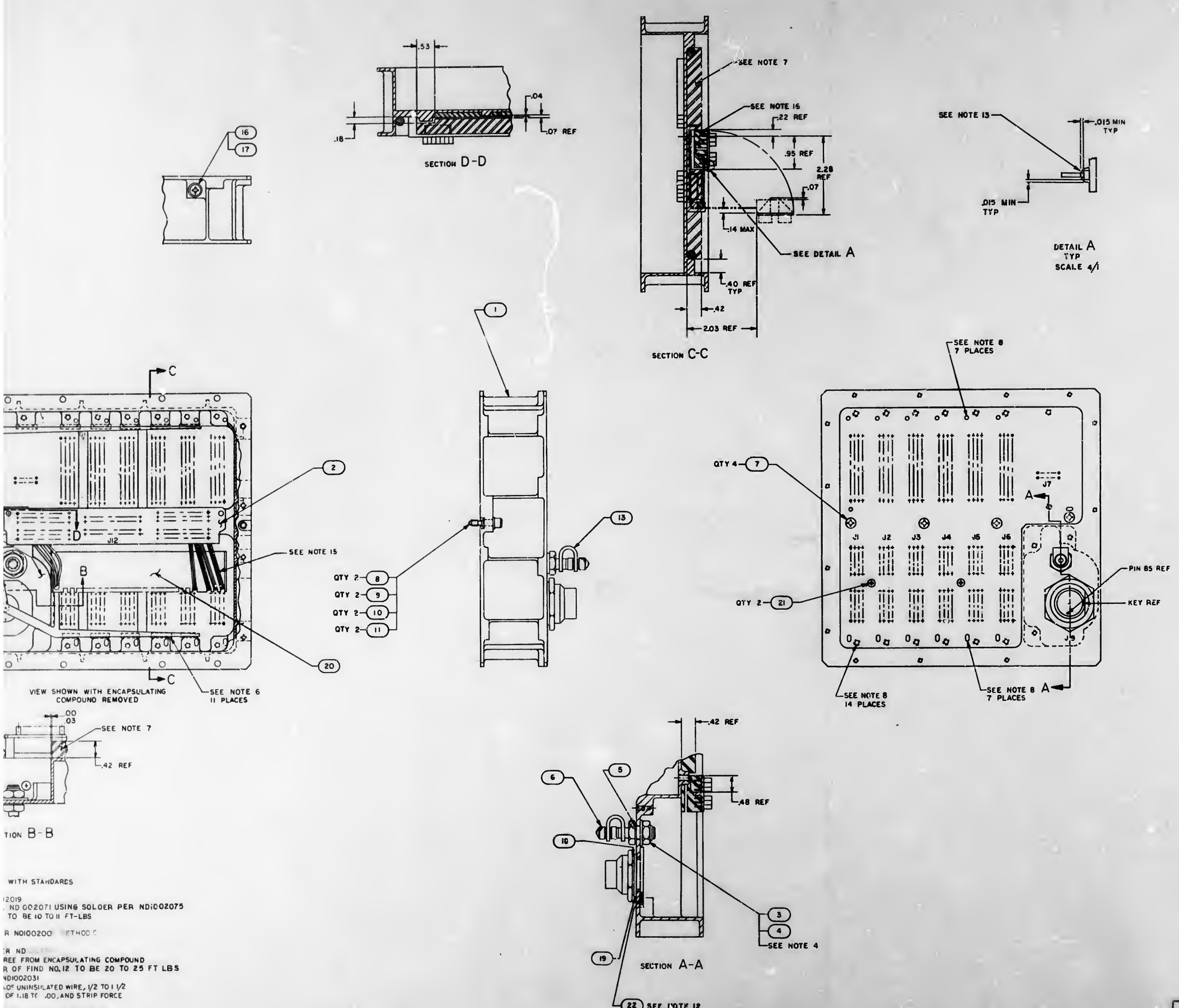
MIT INSTRUMENTATION LABORATORY CAMBRIDGE

2003950 | NEXT ASSY | USED ON | APPLICATION

2003955 B

SHEET 1

SYM	ZONE	REVISIONS DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 27532				
B		REVISED PER TDRR 27913				



WITH STANDARDS

)2019
, ND 002071 USING SOLOER PER ND1002075
TO BE 10 TO 11 FT-LBS

R NO100200 METHOD C

R ND
REE FROM ENCAPSULATING COMPOUND
R OF FIND NO.12 TO BE 20 TO 25 FT LBS
ND1002031
LOF UNINSULATED WIRE, 1/2 TO 1 1/2
OF 1.18 TO .00, AND STRIP FORCE

VIRES AND ENCAPSULATING
CE A

IG AND REPLACE WITH FINO NO. 22
PER ND1002004 TYPE VI
IL
NO. 14 & 15 TO FIND NO. 20 PER NO1002009 METHOD C

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2005953		INTERCONNECTING DIAGRAM	REF
1	1000159-10		PACKING, PREFORMED O RING	22
2	MS51959-13		SCREW, FLAT HD, CROSS-RECESSED	21
1	2004927		COMB, WIRE	20
1	1004546-6		WASHER, FLAT	19
1	1010635-004		WASHER, LOCK	18
1	NAS1598D08M		WASHER, SEALING	17
1	MS51957-42		SCREW, PAN HD, CROSS RECESSED	16
AR	1010807-22		WIRE INSULATED	15
AR	1006376-003	SEE NOTE 14	WIRE, INSULATED	14
1	2004931		RETAINER, VALVE CAP	13
1	2003980-011		WIRING HARNESS, BRANCHED	12
2	MS16633-4015		RING, RETAINING	11
2	1004546-3		WASHER, FLAT	10
2	1004546-1		WASHER, FLAT	9
2	1004579-2		SCREW, JACKING	8
4	MS51959-28		SCREW, FLAT HD, CROSS RECESSED	7
1	2004903		VALVE, PNEUMATIC TANK	6
1	1000159-14		PACKING, PREFORMED, O-RING	5
1	MS15795-814		WASHER, FLAT	4
1	MS20364D624A		NUT, HEX	3
1	2003951-011		CONNECTOR PLATE ASSY	2
1	2003947-011		IDM WIREWRAP PLATE ASSY	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003950	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

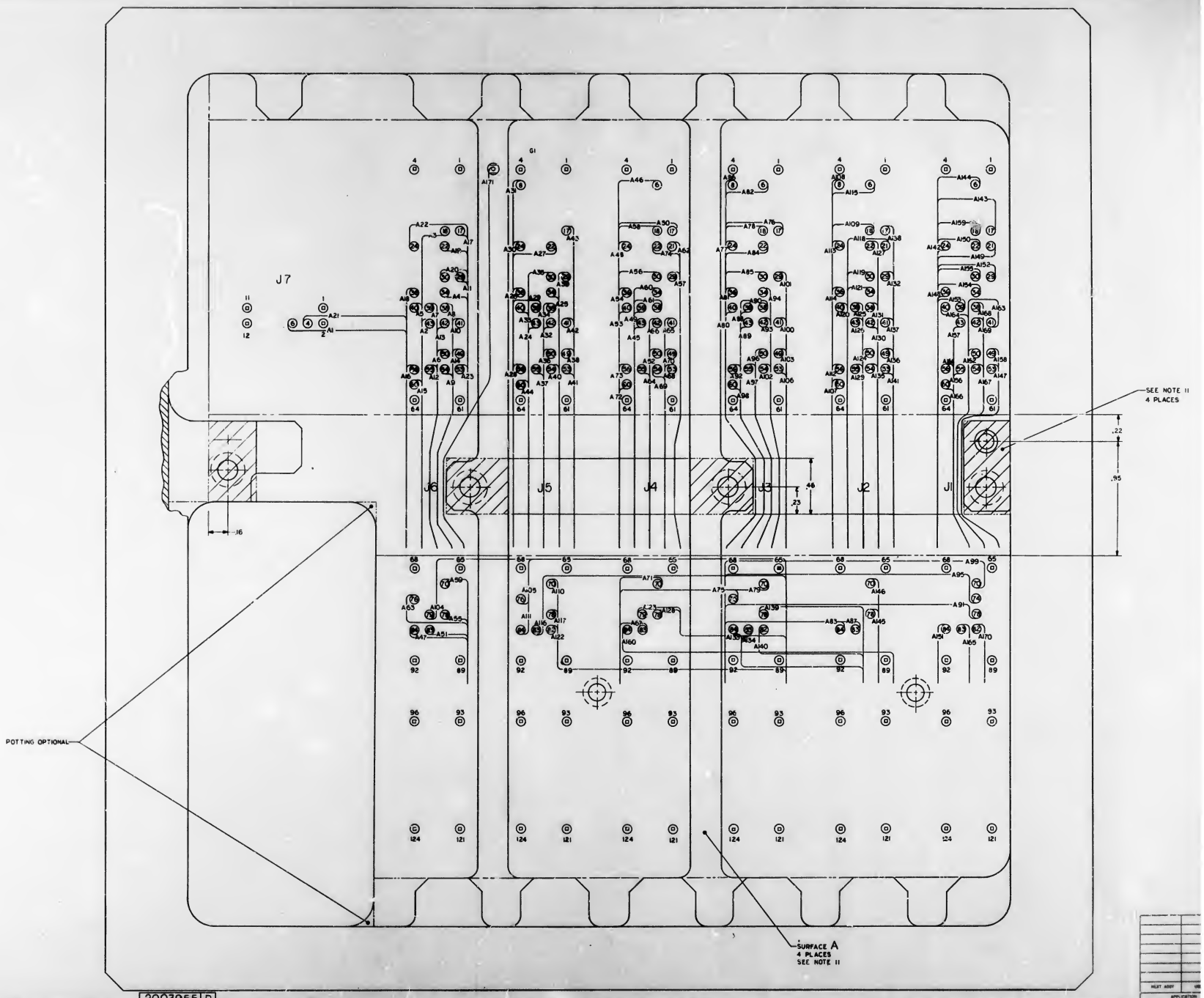
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

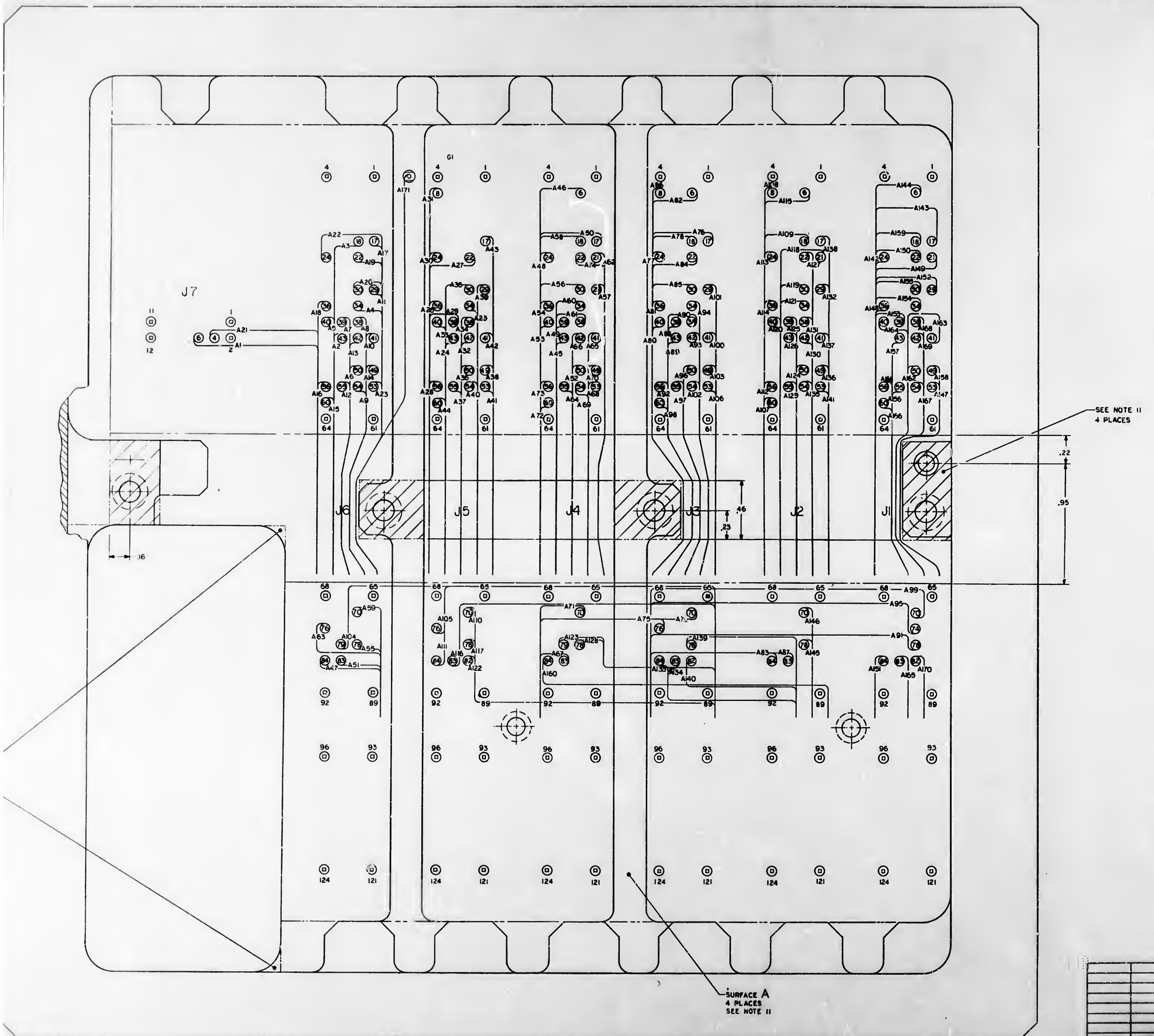
MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 SIZE J DRAWING NO. 2003955

SCALE 1/1 SHEET OF 3


J7
J6
J5
J4
J3
J2
J1
SEE NOTE 11
4 PLACES
.22
.95
.46
.23
.16
POTTING OPTIONAL
SURFACE A
4 PLACES
SEE NOTE 11

SYM	ZONE	DESCRIPTION
A		REVISED PER TDRR 27552
B		REVISED PER TDRR 27913



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON
APPLICATION

LIST OF MATERIALS

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003955

SCALE NONE | SHEET 2 OF 3

2003955 B

2003955 B

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 27552				
B		REVISED PER TDRR 27913				

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A1		J12-166	14	BLUE	30	AR	J7-6	
A2		-167	14		30		J6-43	
A3		-160	15	WHT	26		-18	
A4		-159	14	BLUE	30		-34	
A5		-154					-40	
A6		-153					-50	
A7		-148	14	BLUE	30		-39	
A8		-147	15	WHT	26		-38	
A9		-142	14	BLUE	30		-54	
A10		-141					-41	
A11		-136					-29	
A12		-135					-55	
A13		-187					-42	
A14		-210	14	BLUE	30		-49	
A15		-182	15	WHT	26		-60	
A16		-204	14	BLUE	30		-56	
A17		-192					-17	
A18		-176					-36	
A19		-175					-22	
A20		-174					J6-30	
A21		-170					J7-4	
A22		-169					J6-24	
A23		-168					J5-53	
A24		-164					J5-43	
A25		-163					-34	
A26		-162					-36	
A27		-161					-22	
A28		-158					-56	
A29		-157					-39	
A30		-156	14	BLUE	30		-24	
A31		-155	15	WHT	26		-8	
A32		-152	14	BLUE	30		-42	
A33		-151	14		30		-40	
A34		-150	15	WHT	26		-38	
A35		-149	14	BLUE	30		-30	
A36	SEE NOTE 10	-146					-50	SEE NOTE 10
A37		-145					-55	
A38		-144					-49	
A39		-143					-29	
A40		-140					-54	
A41		-139					-53	
A42		-138					-41	
A43		-137	14	BLUE	30		-17	
A44		-134	15	WHT	26		J5-60	
A45		-133	14	BLUE	30		J4-43	
A46		-132					J4-6	
A47		-131					J6-84	
A48		-130					J4-24	
A49		-129					J4-39	
A50		-128					J4-17	
A51		-127					J6-83	
A52		-126					J4-50	
A53		-125					J4-40	
A54		-124					J4-36	
A55		-123					J6-78	
A56		-122					J4-30	
A57		-121					J4-29	
A58		-120					J4-18	
A59		-119					J6-70	
A60		-118					J4-34	
A61		-117					J4-38	
A62		-116					J4-21	
A63		-115					J6-76	
A64		-114					J4-55	
A65		-113					-41	
A66		-112					-42	
A67		-111					-83	
A68		-110					-53	
A69		-109					-54	
A70		-108					-49	
A71		-107					-70	
A72		J12-106	14	BLUE	30	AR	J4-60	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A73		J12-105	14	BLUE	30	AR	J4-56	
A74		-104					J4-22	
A75		-103					J3-76	
A76		-102					-17	
A77		-101	14	BLUE	30		-24	
A78		-100	15	WHT	26		-18	
A79		-99	14		30		-70	
A80		-98	14	BLUE	30		-40	
A81		-97	14		30		-36	
A82		-96	15	WHT	26		J3-6	
A83		-95	14		30		J2-84	
A84		-94	14	BLUE	30		J3-22	
A85		-93	14		30		J3-30	
A86		-92	15	WHT	26		J3-8	
A87		-91	14		30		J2-83	
A88		-90	14	BLUE	30		J3-39	
A89		-89	14		30		J3-43	
A90		-88	15	WHT	26		J3-38	
A91		-87	14	BLUE	30		J1-78	
A92		-86					J3-56	
A93		-85					J3-42	
A94		-84					J3-34	
A95		-83					J1-74	
A96		-82					J3-50	
A97		-81	14	BLUE	30		J3-55	
A98		-80	15	WHT	26		J3-60	
A99		-79	14	BLUE	30		J1-70	
A100		-78					J3-41	
A101		-77					J3-29	
A102		-76					J3-54	
A103		-75					J3-49	
A104		-74					J6-79	
A105		-73					J5-76	
A106		-72					J3-53	
A107		-71	14	BLUE	30		J2-60	
A108	SEE NOTE 10	-70	15	WHT	26		J2-8	SEE NOTE 10
A109		-69	14	BLUE	30		J2-18	
A110		-68					J5-70	
A111		-67					J5-84	
A112		-66					J2-56	
A113		-65					J2-24	
A114		-64	14	BLUE	30		J2-36	
A115		-63	15	WHT	26		J2-6	
A116		-62	14	BLUE	30		J5-83	
A117		-61					J5-78	
A118		-60					J2-21	
A119		-59					J2-30	
A120		-58					J2-40	
A121		-57					J2-34	
A122		-56					J5-82	
A123		-55					J4-79	
A124		-54					J2-50	
A125		-53					J2-59	
A126		-52					J2-43	
A127		-51					J2-22	
A128		-50					J4-78	
A129		-48					J2-55	
A130		-47					J2-42	
A131		-46					J2-38	
A132		-45					J2-29	
A133		-44					J3-84	
A134		-43					J3-83	
A135		-42					J2-54	
A136		-41					J2-49	
A137		-40					J2-41	
A138		-39					J2-17	
A139		-38					J3-78	
A140		-37					J3-82	
A141		-36					J2-53	
A142		-35					J1-24	
A143		-34	14	BLUE	30		J1-17	
A144		J12-35	15	WHT	26	AR	J1-6	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A145		J12-32	14	BLUE	30	AR	J2-78	
A146		-31					J2-70	
A147		-30					J1-53	
A148		-29					-36	
A149		-28					-21	
A150		-27					-22	
A151		-25					-84	
A152		-24					-29	
A153		-23					-39	
A154		-22					-34	
A155		-21					-30	
A156	SEE NOTE 10	-18					-55	SEE NOTE 10
A157		-17					-43	
A158		-16					-49	
A159		-15					J1-18	
A160		-13					J4-84	
A161		-12					J1-56	
A162		-11					-50	
A163		-10					-41	
A164		-9					-40	
A165		-7					-83	
A166		-6					-60	
A167		-5					-64	
A168		-4					-38	
A169		-3					-42	
A170		J12-1	14	BLUE	30		J1-82	
A171		J12-183	15	WHT	26	AR	G1	SEE NOTE 17

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON
APPLICATION

LIST OF MATERIALS

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED NASA

MAIN HOUSING ASSEMBLY
AGC DSKY

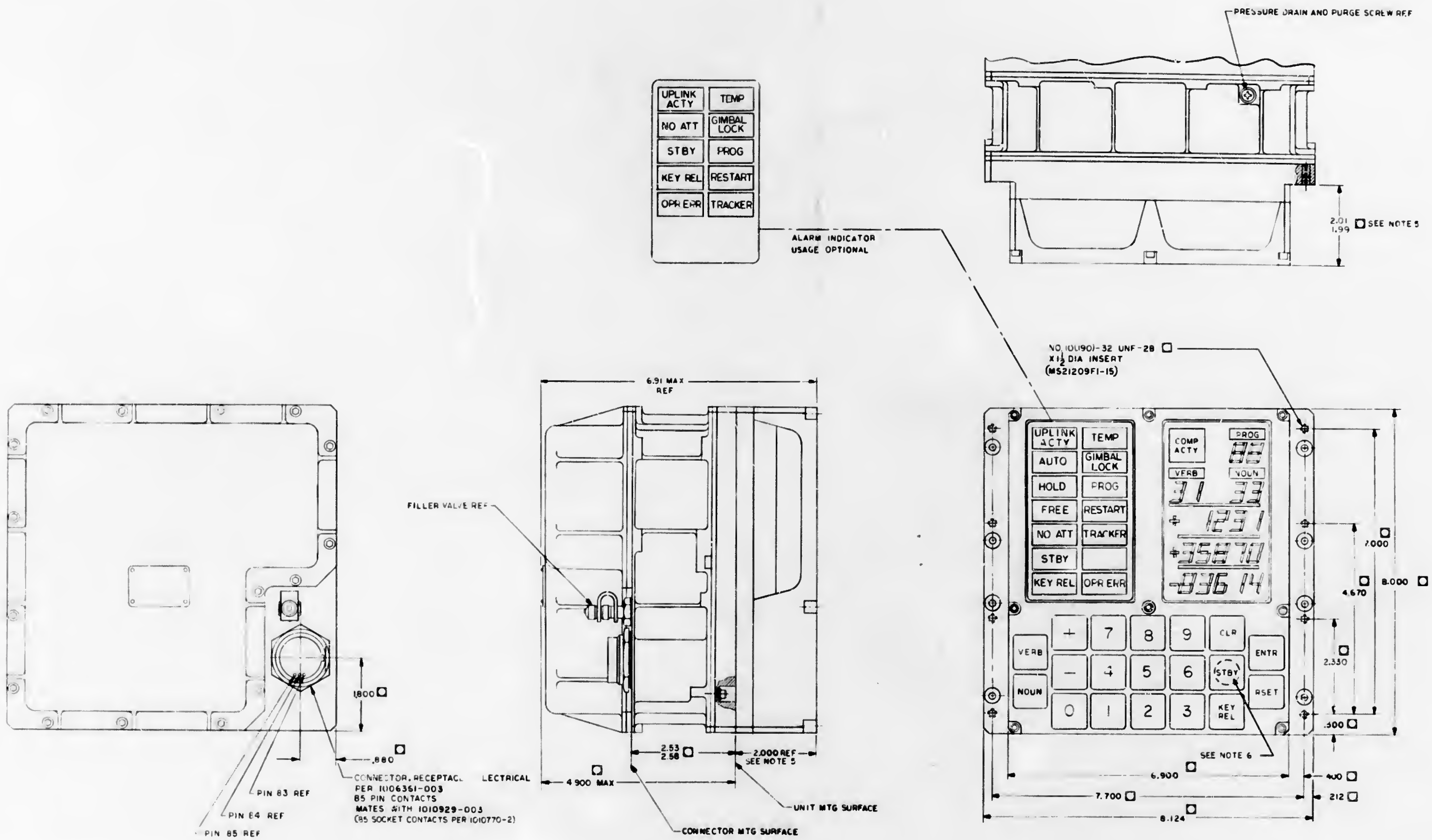
CODE IDENT NO 80230 | SIZE J | DRAWING NO 2003955

SCALE NONE | SHEET 3 OF 3

2003955 B

2003956 B

LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 26104		
B	REVISED PER TDRR 35046		



NOTES:

1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D 70327
3. WEIGHT *later*
4. ◆ INDICATES CENTER OF GRAVITY *later*
5. THE 2.01/1.99 DIMENSION APPLIES TO ALL CONFIGURATION UNIVERSAL DSKYS WITH THE EXCEPTION OF THE 2003985-061, 2003950-031, 2003994-021 & SUBSEQUENT CONFIGURATIONS IN WHICH THE SURFACE OF THE I/L COVER ASSY 2003899-011 SHALL PROTRUDE BEYOND THE MAXIMUM SHOWN UP TO A MAXIMUM OF .09
6. THE 2003985-061, 2003950-031, 2003994-021 & SUBSEQUENT CONFIGURATIONS SHALL REFLECT 'PRO' IN KEY POSITION INDICATED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: FRACTIONS DECIMALS ±.005 ANGLES
DO NOT SCALE THIS DRAWING

M.I.T. INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY
OUTLINE DRAWING

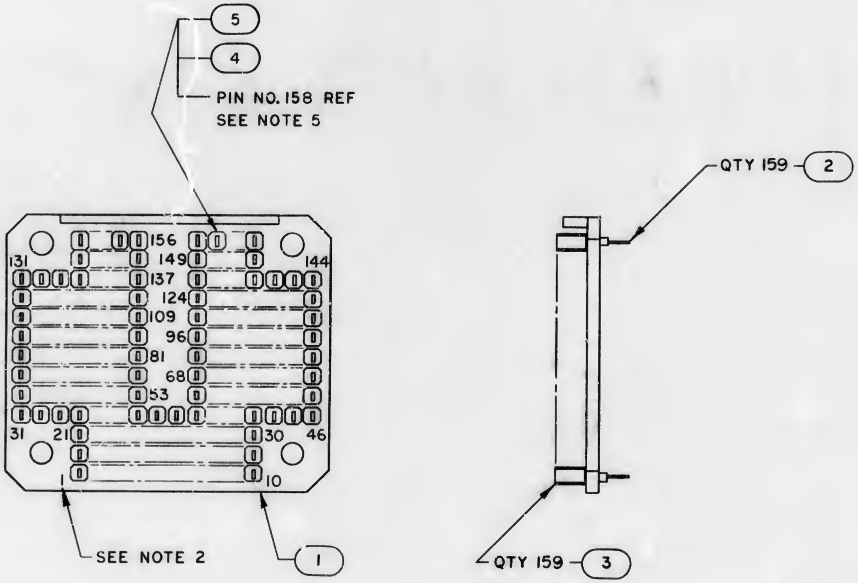
CODE IDENT NO.	SIZE	NASA DRAWING NO.
80230	J	2003956

2003956 B

2003957 A

REVISIONS 26205

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 27739			4/12/66	



QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	1008819-003		SLEEVE, GROUNDING	5
1	1008818-004		CONTACT, WRAPOST-FEMALE GRD	4
159	1006774		INSULATOR, WRAPOST-FEMALE	3
159	1006781-1		CONTACT, WRAPOST-FEMALE	2
1	2004920		PLATE, CONNECTOR	1

011 LIST OF MATERIALS

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK NEAR & FARSIDE APPROXIMATELY WHERE SHOWN .06/.08 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-11
3. IDENTIFY WITH PART NO. PER ND1002019
4. ASSEMBLE FIND NO. 2,3,4 & 5 TO FIND NO. 1 PER ND1002136
5. INSTALL FIND NO. 4 AND 5 IN PIN POSITION NO. 158

NEXT ASSY	USED ON
2003959	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

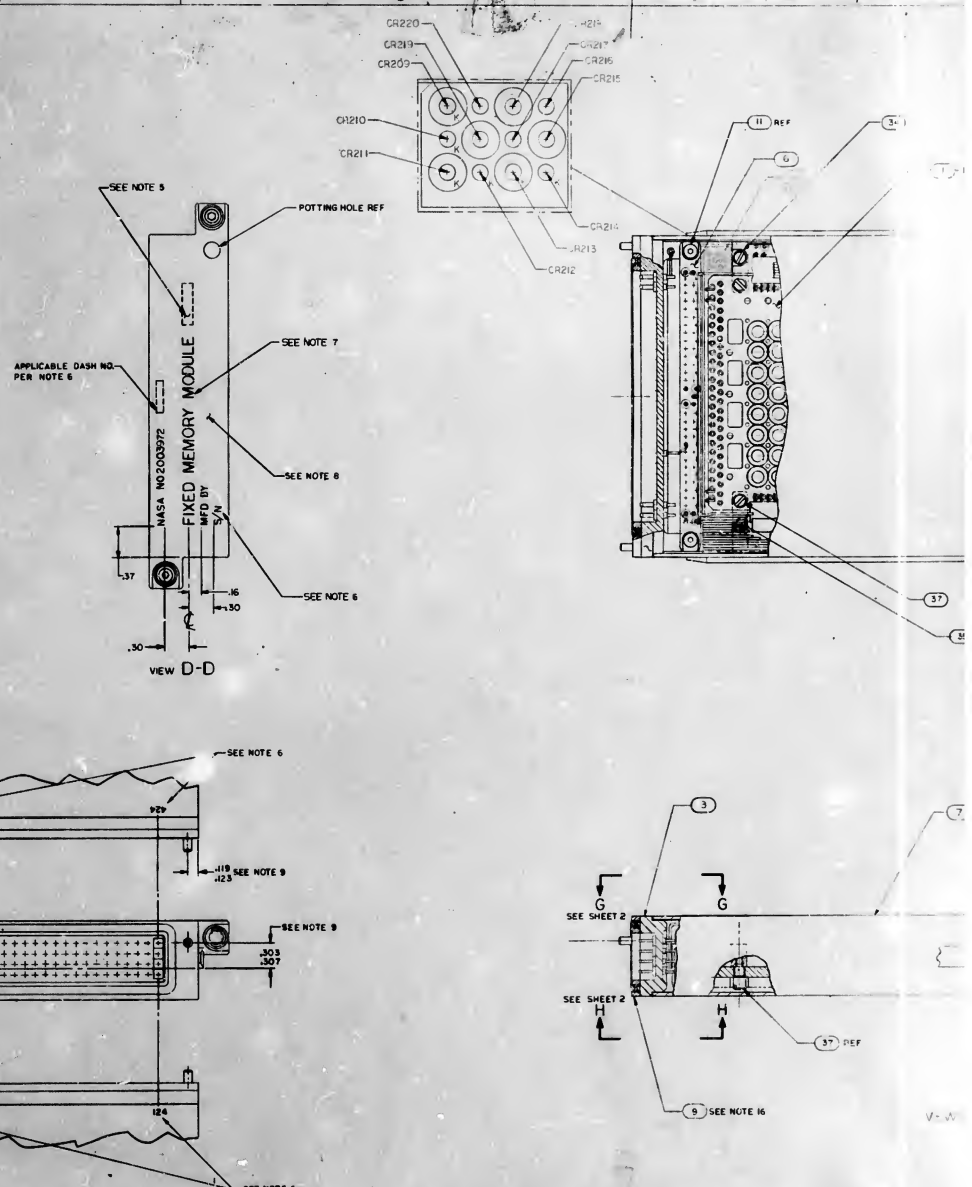
DRAWN R. B. [illegible] 29 NOV 65
CHECKED J. C. [illegible] 3 FEB 66
APPROVED [illegible] 3 FEB 66
APPROVED [illegible] 11 Feb 66
APPROVED MIT [illegible] 11 Feb 66
A. C. METZGER
APPROVED MSC
DATE

CONNECTOR PLATE ASSY
INDICATOR DIGITAL
AGC DSKY

CODE IDENT NO. 80230
SIZE C
DRAWING NO. 2003957
SCALE 2/1
SHEET 1 OF 1

PART NO.	MODULE NO.	FIND NO. 1	FIND NO. 2	MODULE DECK NO.	NEXT ASSEMBLY NO. (REF)	PROCUREMENT SPECIFICATION SEE NOTE 15
2003972-011	B1	2003060-061	2003061-061	0205	2021101	PS2003972
2003972-021	B2	2003060-071	2003061-071	0206	2021101	"
2003972-031	B3	2003060-081	2003061-081	0207	2021101	"
2003972-041	B1	2003060-121	2003061-121	0210	2021104	
2003972-051	B2	2003060-131	2003061-131	0211	2021104	
2003972-061	B3	2003060-141	2003061-141	0212	2021104	
2003972-071	B2	2003060-151	2003061-151	0213	2021104	
2003972-081	B3	2003060-161	2003061-161	0214	2021104	
2003972-091	B2	2003060-171	2003061-171	0215	2021101	"
2003972-111	B3	2003060-181	2003061-181	0216	2021101	PS2003972
2003972-121	B1	2003060-091	2003061-091	0208	2021105-031	PS2003960
2003972-131	B2	2003060-111	2003061-111	0209	2021105-031	PS2003960
2003972-141	B1	2003060-191	2003061-191	0217	2021106-011	PS2003972
2003972-151	B2	2003060-211	2003061-211	0218	2021106-011	"
2003972-161	B3	2003060-221	2003061-221	0219	2021106-011	"
2003972-171	B4	2003060-231	2003061-231	0220	2021106-011	"
2003972-181	B5	2003060-241	2003061-241	0221	2021106-011	"
2003972-191	B6	2003060-251	2003061-251	0222	2021106-011	"
2003972-211	B3	2003060-261	2003061-261	0223	2021104-041	PS2003972
2003972-221	B1	2003060-271	2003061-271	0224	2021105-041	PS2003960
2003972-231	B1	2003060-281	2003061-281	0225	2021106-021	PS2003972
2003972-241	B3	2003060-291	2003061-291	0226	2021106-021	"
2003972-251	B5	2003060-311	2003061-311	0227	2021106-021	"
2003972-261	B1	2003060-321	2003061-321	0230	2021107-011	"
2003972-271	B2	2003060-331	2003061-331	0229	2021107-011	"
2003972-291	B6	2003060-341	2003061-341	0231	2021106-031	"
2003972-291	B1	2003060-351	2003061-351	0238	2021107-021	PS2003972
2003972-341	B1	2003060-361	2003061-361	0239	2021108-021	PS2016016
" -351	B2	2003060-371	2003061-371	0240	2021108-021	PS2016016
-331	B3	2003060-381	2003061-381	0241	2021108-021	PS2016016
-341	B4	2003060-391	2003061-391	0242	2021108-021	PS2016016
-351	B5	2003060-411	2003061-411	0243	2021108-021	PS2016016
2003972-361	B6	2003060-421	2003061-421	0244	2021108-021	PS2016016
2003972-371	B1	2003060-431	2003061-431	0245	2021110-011	PS2016016
2003972-381	B2	2003060-441	2003061-441	0246	2021110-011	"
2003972-391	B3	2003060-451	2003061-451	0247	2021110-011	"
2003972-411	B4	2003060-461	2003061-461	0248	2021110-011	"
2003972-421	B5	2003060-471	2003061-471	0249	2021110-011	"
2003972-431	B6	2003060-481	2003061-481	0250	2021110-011	PS2016016
" -441	B1	2003060-491	2003061-491	0251	2021110-021	PS2016016
" -451	B2	2003060-511	2003061-511	0252	2021110-021	"
" -461	B3	2003060-521	2003061-521	0253	2021110-021	"
" -471	B4	2003060-531	2003061-531	0254	2021110-021	"
" -481	B5	2003060-541	2003061-541	0255	2021110-021	"
2003972-491	B6	2003060-551	2003061-551	0256	2021110-021	PS2016016
" -511	B1	" -561	" -561	0257	2021111-021A031	PS2016036
" -521	B2	" -571	" -571	0258	" -021A031	"
" -531	B3	" -581	" -581	0259	" -021A031	"
" -541	B4	" -591	" -591	0260	2021111-021A031	"
" -551	B5	" -611	" -611	0261	2021111-021	"
2003972-561	B6	2003060-621	2003061-621	0262	2021111-021A031	PS2016036
2003972-571	B1	2003060-631	2003061-631	0263	2021111-031	PS2016036
2003972-581	B1	2003060-641	2003061-641	0264	2021110-031	PS2016036
" -591	B2	" -651	" -651	0265	2021110-031	"
" -611	B3	" -661	" -661	0266	2021110-031	"
" -621	B4	" -671	" -671	0267	2021110-031	"
" -631	B5	" -681	" -681	0268	2021110-031	"
2003972-641	B6	2003060-691	2003061-691	0269	2021110-031	PS2016036
2003972-651	B1	2003060-711	2003061-711	0270	2021111-041	PS2016036
" -661	B2	" -721	" -721	0271	" -041	"
" -671	B3	" -731	" -731	0272	" -041	"
" -681	B4	" -741	" -741	0273	" -041	"
" -691	B5	" -751	" -751	0274	" -041	"
2003972-711	B6	2003060-761	2003061-761	0275	2021111-041	PS2016036
2003972-721	B1	2003060-771	2003061-771	0276	2021112-011	PS2016036
" -731	B2	" -781	" -781	0277	" -011	"
" -741	B3	" -791	" -791	0278	" -011	"
" -751	B4	" -811	" -811	0279	" -011	"
" -761	B5	" -821	" -821	0280	" -011	"
2003972-771	B6	2003060-831	2003061-831	0281	2021112-011	PS2016036
2003972-781	B1	2003060-841	2003061-941	0282	2021113-011	PS2016036
" -791	B2	" -851	" -851	0283	" -011	"
" -811	B3	" -861	" -861	0284	" -011	"
" -821	B4	" -871	" -871	0285	" -011	"
" -831	B5	" -881	" -881	0286	" -011	"
2003972-841	B6	2003060-891	2003061-891	0287	2021113-011	PS2016036
2003972-851	B1	2003060-911	2003061-911	0288	2021113-021	PS2016036
2003972-861	B1	2003060-921	2003061-921	0289	2021113-031	PS2016036
" -871	B2	" -931	" -931	0290	" -031	"
" -881	B3	" -941	" -941	0291	" -031	"
" -891	B4	" -951	" -951	0292	" -031	"
" -911	B5	" -961	" -961	0293	" -031	"
2003972-921	B6	2003060-971	2003061-971	0294	2021113-031	PS2016036
2003972-931	B1	2003060-981	2003061-981	0295	2021112-031	PS2016036
2003972-941	B2	2003060-991	2003061-991	0296	2021113-041	PS2016036
" -951	B3	" -1001	" -1001	0297	2021112-031	"
" -961	B2	" -1021	" -1021	0298	"	"
" -971	B3	" -1031	" -1031	0299	"	"
" -981	B4	" -1041	" -1041	0300	"	"
" -991	B5	" -1051	" -1051	0301	"	"
2003972-1001	B6	2003060-1061	2003061-1061	0302	2021112-021	PS2016036
2003972-1021	B1	2003060-1071	2003061-1071	0303	2021112-041	PS2016036
2003972-1031	B2	2003060-1081	2003061-1081	0304	2021113-051	PS2016036

CONTINUED ON SHEET 3

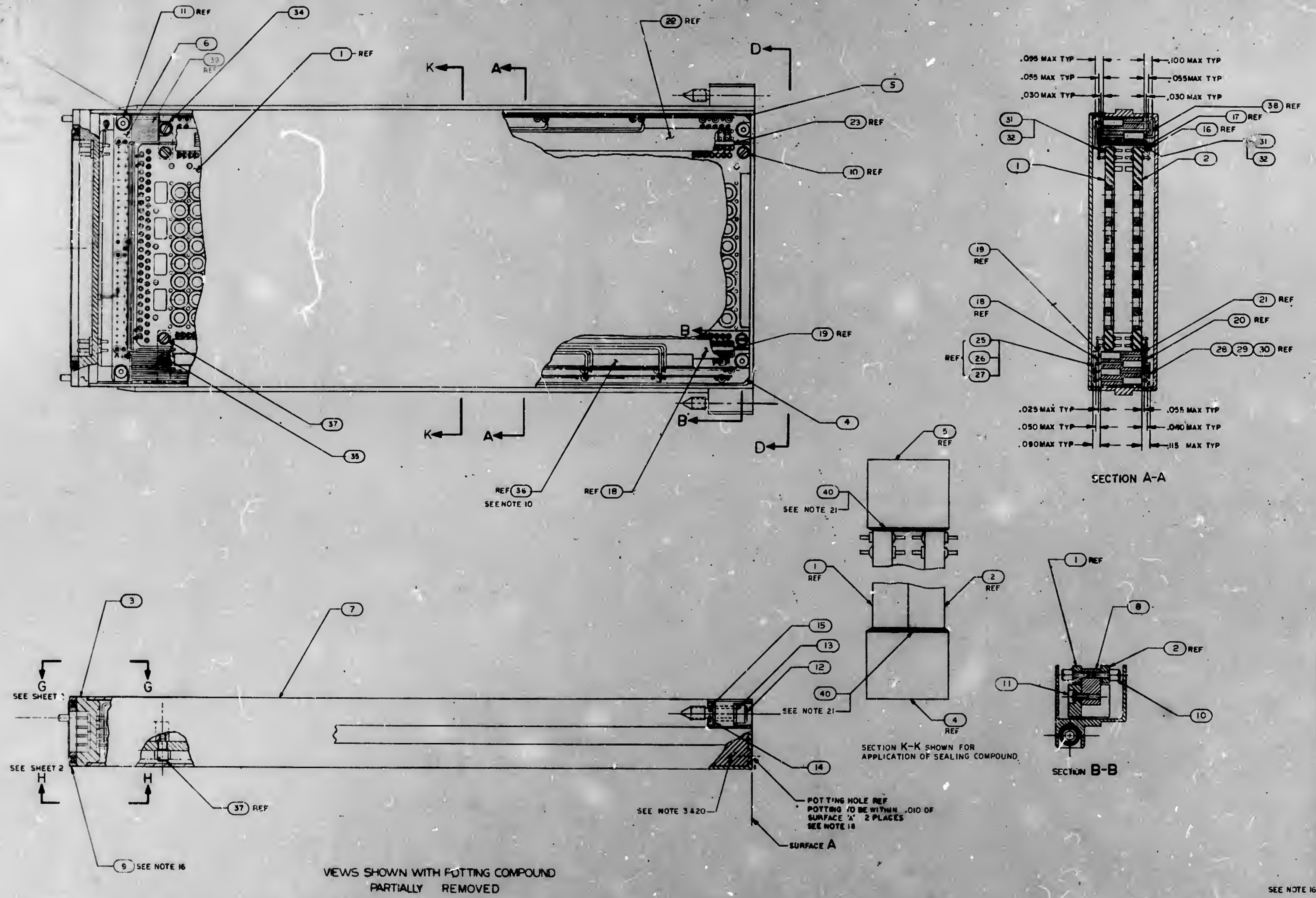


NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002068
3. ENCAPSULATE MODULE PER ND1002226 METHOD II
4. WELD PER ND1002005
5. MARK APPROPRIATE MODULE NO. AS SHOWN IN CHART
6. MARK .08 .406 HIGH PER ND1002019 AND ND1002122, TYPE II CLASS 2 AND SERIALIZE PER ND 1002023 USING INK 1006271-1
7. MARK .14 .10 HIGH PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING INK ND1006271-1
8. PAINT IN INDICATED SURFACES OF FIND NO 7. PER ND1002279 WITH SCD NO. 1008809-1 DARK GREY EPOXY RESIN ENAMEL, FINAL COAT PER ND1002277 USING 1012543-003
9. ASSEMBLE FIND NO.7 AND FIND NO.3 TO DIMENSIONS SHOWN
10. REMOVE LINER FROM NEARSIDE OF FIND NO.36 AND ASSEMBLE 3 PLACES AS SHOWN. FIND NO.36 MUST INSULATE FLAT CABLES FROM TRIMMED COMPONENT LEADS + TRIM AS REQUIRED
11. WHITE DOT AND SINGLE SOLID LEAD DENOTES FIRST LEVEL WIRING UNLESS OTHERWISE SPECIFIED
12. BLACK DOT AND SINGLE SOLID LEAD DENOTES SECOND LEVEL WIRING
13. BLACK DOT AND CROSS HATCHED LEAD DENOTES THIRD LEVEL WIRING
14. ALL LEADS FROM FIND NO.1 AND FIND NO.2 TO FIND NO.3 TO BE THIRD LEVEL WIRING
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PROCUREMENT SPECIFICATION AS LISTED IN CHART.
16. FIND NO.9 TO BE SHIPPED UNASSEMBLED AND IDENTIFIED PER ND 1002019
17. SEAL PINS AND INSULATORS TO FIND NO. 3 PER ND1002004 TYPE III BEFORE ASSY OF FIND NO. 6
18. FILL AS SHOWN PER ND1002235 METHOD A
19. BOND FIND NO.39 TO FIND NO. 3 PER ND1002004 TYPE III AFTER ASSY OF FIND NO.6
20. PRIOR TO ENCAPSULATION PER NOTE 3, COAT OVER ALL TERMINALS OF FIND NO'S 1,2,3 AND OVER ALL WIRES, SLEEVING AND COMPONENT LEADS OF FIND NOS 4,5,6,10,11,18,20,21,22,23,24, 25,26,27,28,29,30,31,32,33,38 & 39 WITH A .03 MAXIMUM THICKNESS OF SILICONE RUBBER PER ND1002009, METHOD A. MASK ALL OUTSIDE SURFACES OF FIND NO.3 AND ALL OTHER SURFACES OF THIS ASSEMBLY COMING IN CLOSE CONTACT WITH FIND NO.7
21. FILL INTERFACE BETWEEN FIND NO. 4 AND SIDE SURFACES OF FIND NO'S 1 AND 2, AND INTERFACE BETWEEN FIND NO.5 AND SIDE SURFACES OF FIND NO'S 1 AND 2 USING FIND NO. 40, ROOM TEMP CURE FOR 24 HOURS MIN.

REFERENCES:

1. PROCESS REQUIREMENTS FOR CONTROL AND INSPECTION OF ROPE MEMORY ASSEMBLIES ND1002285
2. FIXED MEMORY FIXTURE DWG NO. 4P22500



REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 304[illegible] DR [illegible] CHK [illegible]		
C	REVISED PER TDRR 33[illegible]4 DR [illegible] CHK [illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 33606 DR [illegible] CHK [illegible]	[illegible]	[illegible]
E	REVISED PER TDRR 34140 DR [illegible] CHK [illegible]	[illegible]	[illegible]
F	REVISED PER TDRR 34489 DR [illegible] CHK [illegible]	[illegible]	[illegible]
G	REVISED PER TDRR [illegible]	[illegible]	[illegible]
H	REVISED PER TDRR 35319 DR [illegible]	[illegible]	[illegible]
J	REVISED PER TDRR [illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
K	REVISED PER TDRR 35[illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
L	REVISED PER TDRR 36217 DR [illegible] CHK [illegible]	[illegible]	[illegible]
M	REVISED PER TDRR [illegible]		[illegible]
N	REVISED PER TDRR 36685 DR [illegible] CHK [illegible]	[illegible]	[illegible]
P	REVISED PER TDRR [illegible]	[illegible]	[illegible]
R	REVISED PER TDRR 36858 DR [illegible] CHK [illegible]	[illegible]	[illegible]
S	REVISED PER TDRR 36916 DR [illegible] CHK [illegible]	[illegible]	[illegible]
T	REVISED PER TDRR 36970 DR [illegible] CHK [illegible]	[illegible]	[illegible]
U	REVISED PER TDRR 3700[illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
V	REVISED PER TDRR 37148 DR [illegible] CHK [illegible]	[illegible]	[illegible]
W	REVISED PER TDRR 37387 DR [illegible] CHK [illegible]	[illegible]	[illegible]
Y	REVISED PER TDRR 37427 DR [illegible] CHK [illegible]	[illegible]	[illegible]
Z	REVISED PER TDRR 37454 DR [illegible] CHK [illegible]	[illegible]	[illegible]
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AD	REVISED PER TDRR 376[illegible]4 DR [illegible] CHK [illegible]	[illegible] 69	PBB
AE	REVISED PER TDRR 37747 DR [illegible] CHK [illegible]	10/3/69	PBB

LIST OF MATERIALS

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
AR	1006341	ADHESIVE SEALANT, SILICONE RUBBER	40
1	2003986-021	COMPONENT BLOCK DIODE ASSY	39
X	2005935	SCHEMATIC	REF
1	2004684	FLAT CABLE	38
4	2004150-003	SCREW, SHOULDERED	37
AR	1006806-26	INSULATION TAPE, ELECTRICAL	36
1	2004150-001	SCREW, SHOULDERED	35
1	2004150-002	SCREW, SHOULDERED	34
1	2004129	FLAT CABLE INTERCONNECTION	33
AR	1005776-25	SLEEVING	32
AR	1006757-12	WIRE, ELECTRICAL	31
1	2004125	FLAT CABLE	30
1	2004122	FLAT CABLE	29
1	2004124	FLAT CABLE	28
1	2004123	FLAT CABLE	27
1	2004121	FLAT CABLE	26
1	2004120	FLAT CABLE	25
1	2004685	FLAT CABLE	24
	2003051-013	MATRIX ASSY	23
1	2003051-014	MATRIX ASSY	22
8	2003051-016	MATRIX ASSY	21
8	2003051-015	MATRIX ASSY	20
1	2003051-017	MATRIX ASSY	19
1	2003051-018	MATRIX ASSY	18
1	2003051-011	MATRIX ASSY	17
1	2003051-012	MATRIX ASSY	16
2	MS16633-4015	E RING	15
2	1004546-3	WASHER	14
2	1004546-1	WASHER	13
2	1004579-1	SCREW, JACKING	12
4	1000093-1	SCREW, BUTTONHEAD	11
4	2004151	SCREW, STANDOFF	10
1	1006399	GASKET PLATE (SEE NOTE 16)	9
2	2004071	STANDOFF	8
1	2004100	HOUSING	7
1	2003048-021	RESISTOR-DIODE BLOCK ASSY	6
1	2003052-021	COMPONENT BLOCK RESISTOR ASSY	5
1	2003046-021	COMPONENT BLOCK DIODE ASSY	4
1	2003873-011	CONNECTOR PLATE ASSY	3
1	2003061-SEE CHART	SENSE WIRING ASSY SIDE B	2
1	2003060-SEE CHART	SENSE WIRING ASSY SIDE A	1

FOR APPLICABLE PART NO. SEE CHART

SEE CHART

TOLERANCES ± — .02 ± 2°

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FIXED MEMORY MODULE ASSEMBLY

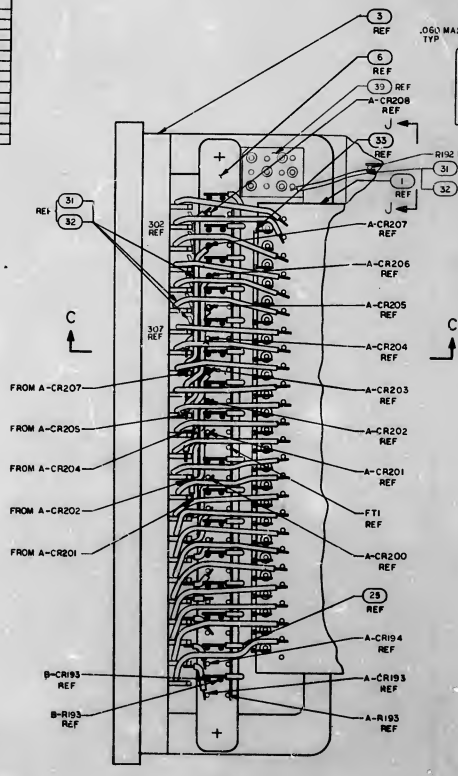
CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003972 | SHEET 1 OF 2

2003972 AE

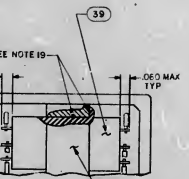
WIRE LIST			
PIN NO.	COMPONENT OR TERM. NO.	PIN NO.	COMPONENT OR TERM. NO.
101	A-E1-213	301	GROUND
102	A-E1-212	302	CR209
103	A-E1-211	303	CR210
104	A-E0211	304	CR211
105	A-E1-210	305	CR212
106	A-E1-209	306	CR213
107	A-E1-208	307	CR214
108	A-E1-207	308	A-CR208
109	A-E1-206	309	A-CR207
110	A-E1-205	310	A-CR206
111	A-E1-204	311	A-CR205
112	A-E1-203	312	A-CR204
113	A-E1-202	313	A-CR203
114	A-E1-201	314	A-CR202
115	A-E1-200	315	A-CR201
116	A-E1-199	316	A-CR200
117	A-E1-198	317	A-CR199
118	A-E1-197	318	A-CR198
119	A-E1-196	319	A-CR197
120	A-E1-195	320	A-CR196
121	A-E0-194	321	A-CR195
122	A-E1-194	322	A-CR194
123	A-E0-193	323	A-CR193
124	A-E1-193	324	SPARE
201	B-R208	401	B-E1-213
202	CR215	402	B-E1-212
203	CR216	403	B-E1-211
204	CR217	404	B-E0-211
205	CR218	405	B-E1-210
206	CR219	406	B-E1-209
207	CR220	407	B-E1-208
208	B-CR208	408	B-E1-207
209	B-CR207	409	B-E1-206
210	B-CR206	410	B-E1-205
211	B-CR205	411	B-E1-204
212	B-CR204	412	B-E1-203
213	B-CR203	413	B-E1-202
214	B-CR202	414	B-E1-201
215	B-CR201	415	B-E1-200
216	B-CR200	416	B-E1-199
217	B-CR199	417	B-E1-198
218	B-CR198	418	B-E1-197
219	B-CR197	419	B-E1-196
220	B-CR196	420	B-E1-195
221	B-CR195	421	B-E0-194
222	B-CR194	422	B-E1-193
223	B-CR193	423	B-E0-193
224	SPARE	424	B-E1-193

WIRE LIST	
TERMINAL NO.	TERMINAL NO.
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
A-E0-195	B-E0-195
A-E0-196	B-E0-196
A-E0-197	B-E0-197
A-E0-198	B-E0-198
A-E0-199	B-E0-199
A-E0-200	B-E0-200
A-E0-201	B-E0-201
A-E0-202	B-E0-202
A-E0-203	B-E0-203
A-E0-204	B-E0-204
A-E0-205	B-E0-205
A-E0-206	B-E0-206
A-E0-207	B-E0-207
A-E0-208	B-E0-208
A-E0-209	B-E0-209
A-E0-210	B-E0-210
SPARE	SPARE
SPARE	SPARE
A-E0-212	B-E0-212
A-E0-213	B-E0-213

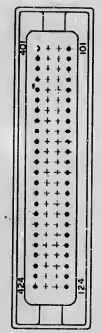
WIRE LIST	
COMPONENT NO.	COMPONENT NO.
CR215	R176
CR216	R144
CR217	R112
CR218	R80
CR219	R48
CR220	R16
CR209	R32
CR210	R64
CR211	R96
CR212	R128
CR213	R160
CR214	R192



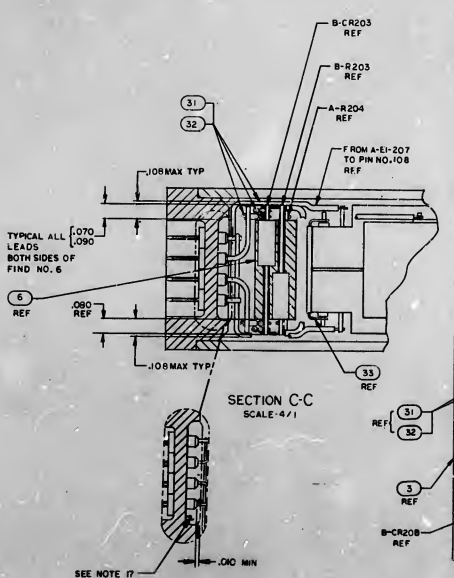
VIEW G-G
SCALE:4/1
SHOWN WITH POTTING AND FIND NO.7 REMOVED. SEE NOTES 11,12,13 AND 14



VIEW J-J



SECTION E-E



SECTION C-C
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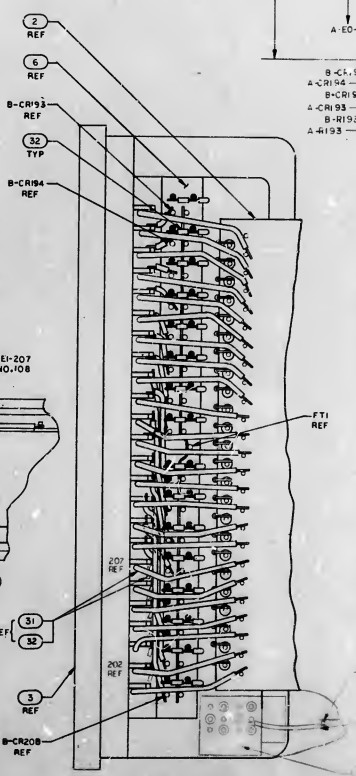
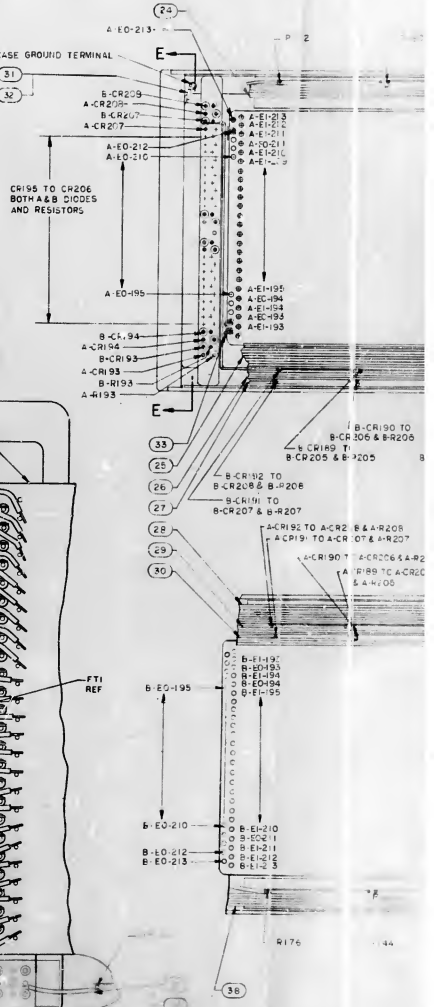
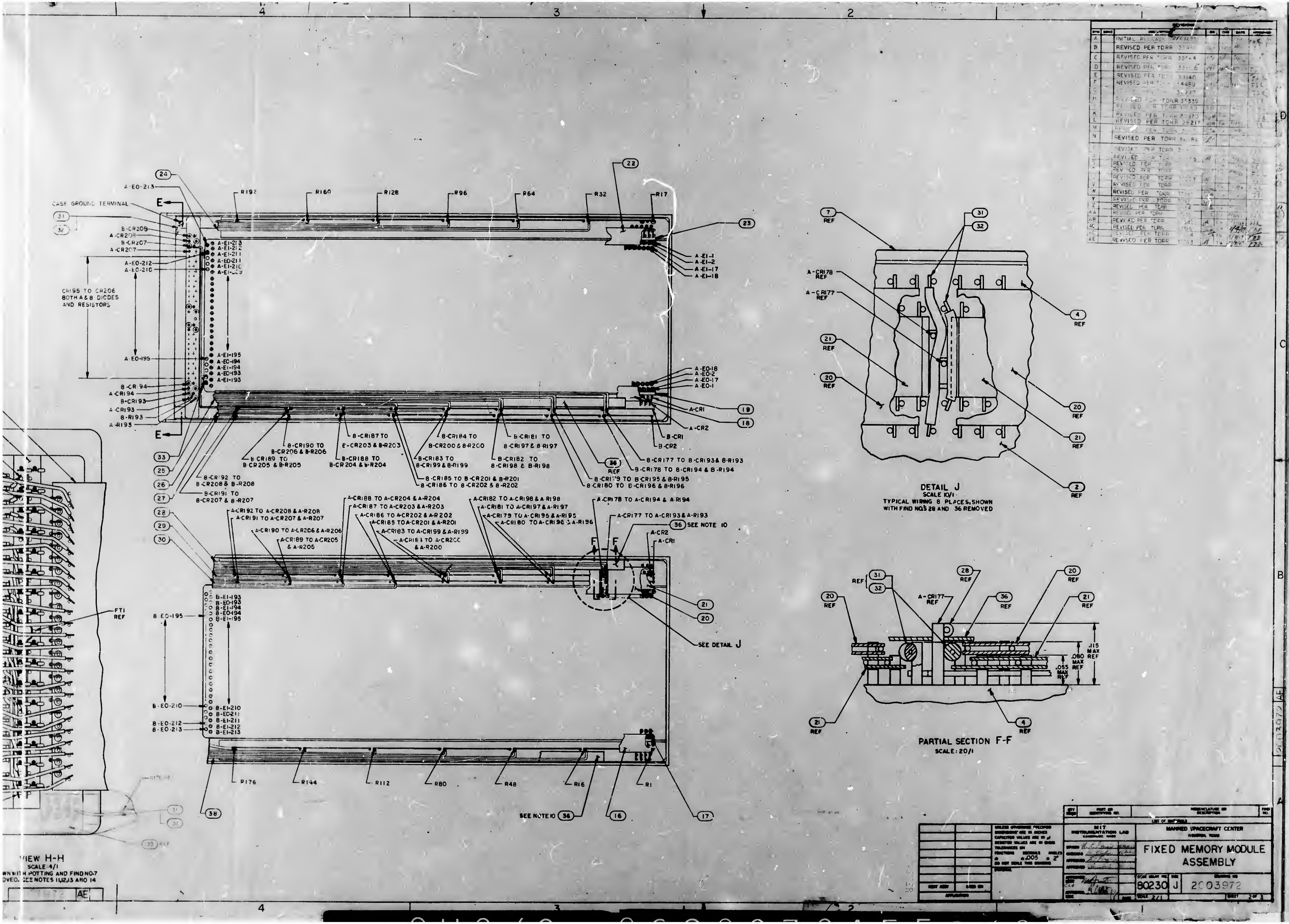


VIEW H-H
SCALE:4/1
SHOWN WITH POTTING AND FIND NO.7 REMOVED. SEE NOTES 11,12,13 AND 14





CASE GROUND TERMINAL
CR195 TO CR206 BOTH A & B DIODES AND RESISTORS
R192
R160
R128
R96
R64
R32
R17
R176
R144
R112
R80
R48
R16
R1
B-CR190 TO B-CR206 & B-R206
B-CR189 TO B-CR205 & B-R205
B-CR187 TO B-CR203 & B-R203
B-CR188 TO B-CR204 & B-R204
B-CR184 TO B-CR200 & B-R200
B-CR183 TO B-CR199 & B-R199
B-CR181 TO B-CR197 & B-R197
B-CR182 TO B-CR198 & B-R198
B-CR177 TO B-CR193 & B-R193
B-CR178 TO B-CR194 & B-R194
B-CR185 TO B-CR201 & B-R201
B-CR186 TO B-CR202 & B-R202
B-CR192 TO B-CR208 & B-R208
B-CR191 TO B-CR207 & B-R207
A-CR188 TO A-CR204 & A-R204
A-CR187 TO A-CR203 & A-R203
A-CR192 TO A-CR208 & A-R208
A-CR191 TO A-CR207 & A-R207
A-CR186 TO A-CR202 & A-R202
A-CR185 TO A-CR201 & A-R201
A-CR190 TO A-CR206 & A-R206
A-CR189 TO A-CR205 & A-R205
A-CR183 TO A-CR199 & A-R199
A-CR184 TO A-CR200 & A-R200
A-CR182 TO A-CR198 & A-R198
A-CR181 TO A-CR197 & A-R197
A-CR179 TO A-CR195 & A-R195
A-CR180 TO A-CR196 & A-R196
A-CR178 TO A-CR194 & A-R194
A-CR177 TO A-CR193 & A-R193
SEE NOTE 10
SEE DETAIL J
DETAIL J
SCALE 10/1
TYPICAL WIRING 8 PLACES, SHOWN WITH FIND NO'S 28 AND 36 REMOVED
PARTIAL SECTION F-F
SCALE: 20/1
VIEW H-H
SCALE: 4/1
FIXED MEMORY MODULE ASSEMBLY
MIT INSTRUMENTATION LAB
MANNED SPACECRAFT CENTER
80230 J 2003972

PART NO.	MODULE NO.	FIND NO. 1	FIND NO. 2	MODULE DECK NO.	NEXT ASSEMBLY NO (REF)	PROCUREMENT SPECIFICATION SEE NOTE 18
2003972 — 1041	B1	2003060 — 1091	2003061 — 1091	0305	2021112 — 051	PS 2016036
2003972 — 1091	B2	2003060 — 1111	2003061 — 1111	0306	2021112 — 051	PS 2016036
2003972 — 1061	B5	2003060 — 1121	2003061 — 1121	0307	2021112 — 051	PS 2016036
2003972 — 1071	B1	2003060 — 1091	2003061 — 1151	0308	2021112 — 061	PS 2016036
2 — 1081	B	2003060 — 1121	2003061 — 1141	0309	2021113 — 061	PS2016036
— 1	B	" — 1141	" — 1151	0310	"	"
— 1	B	" — 1151	" — 1161	0311	"	"
— 1	B	" — 1161	" — 1171	0312	"	"
— 1	B	" — 1171	" — 1181	0313	"	"
— 1	B	2003060 — 1151	2003061 — 1191	0314	2021113 — 061	PS2016036

REVISIONS		
SYM	DESCRIPTION	
	INITIAL RELEASE [illegible]	
B	REVISED PER TDRR 334[illegible]	
C	REVISED PER TDRR [illegible]	
D	REVISED PER TDRR 33606	
E	REVISED PER TDRR 34140	
F	REVISED PER TDRR 34485	
G	REVISED [illegible]	
H	[illegible] TDRR 35313	
J	REVISED PER TDRR [illegible]	
K	REVISED PER TDRR 35970	
L	REVISED PER TDRR 3[illegible]	
M	[illegible]	
N	REVISED PER TDRR 36486	
P–AF	[illegible]	

WIRE LIST

TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.
A-EO-1	A-CR1	A-EO-97	A-CR97	B-EO-1	B-CR1	B-EO-97	B-CR97	A-EI-1	R1	A-EI-49	R49	A-EI-97	R97	A-EI-145	R145
A-EO-2	A-CR2	A-EO-98	A-CR98	B-EO-2	B-CR2	B-EO-98	B-CR98	B-EI-1		B-EI-49		B-EI-97		B-EI-145	
A-EO-3	A-CR3	A-EO-99	A-CR99	B-EO-3	B-CR3	B-EO-99	B-CR99	A-EI-2	R2	A-EI-50	R50	A-EI-98	R98	A-EI-146	R146
A-EO-4	A-CR4	A-EO-100	A-CR100	B-EO-4	B-CR4	B-EO-100	B-CR100	B-EI-2		B-EI-50		B-EI-98		B-EI-146	
A-EO-5	A-CR5	A-EO-101	A-CR101	B-EO-5	B-CR5	B-EO-101	B-CR101	A-EI-3	R3	A-EI-51	R51	A-EI-99	R99	A-EI-147	R147
A-EO-6	A-CR6	A-EO-102	A-CR102	B-EO-6	B-CR6	B-EO-102	B-CR102	B-EI-3		B-EI-51		B-EI-99		B-EI-147	
A-EO-7	A-CR7	A-EO-103	A-CR103	B-EO-7	B-CR7	B-EO-103	B-CR103	A-EI-4	R4	A-EI-52	R52	A-EI-100	R100	A-EI-148	R148
A-EO-8	A-CR8	A-EO-104	A-CR104	B-EO-8	B-CR8	B-EO-104	B-CR104	B-EI-4		B-EI-52		B-EI-100		B-EI-148	
A-EO-9	A-CR9	A-EO-105	A-CR105	B-EO-9	B-CR9	B-EO-105	B-CR105	A-EI-5	R5	A-EI-53	R53	A-EI-101	R101	A-EI-149	R149
A-EO-10	A-CR10	A-EO-106	A-CR106	B-EO-10	B-CR10	B-EO-106	B-CR106	B-EI-5		B-EI-53		B-EI-101		B-EI-149	
A-EO-11	A-CR11	A-EO-107	A-CR107	B-EO-11	B-CR11	B-EO-107	B-CR107	A-EI-6	R6	A-EI-54	R54	A-EI-102	R102	A-EI-150	R150
A-EO-12	A-CR12	A-EO-108	A-CR108	B-EO-12	B-CR12	B-EO-108	B-CR108	B-EI-6		B-EI-54		B-EI-102		B-EI-150	
A-EO-13	A-CR13	A-EO-109	A-CR109	B-EO-13	B-CR13	B-EO-109	B-CR109	A-EI-7	R7	A-EI-55	R55	A-EI-103	R103	A-EI-151	R151
A-EO-14	A-CR14	A-EO-110	A-CR110	B-EO-14	B-CR14	B-EO-110	B-CR110	B-EI-7		B-EI-55		B-EI-103		B-EI-151	
A-EO-15	A-CR15	A-EO-111	A-CR111	B-EO-15	B-CR15	B-EO-111	B-CR111	A-EI-8	R8	A-EI-56	R56	A-EI-104	R104	A-EI-152	R152
A-EO-16	A-CR16	A-EO-112	A-CR112	B-EO-16	B-CR16	B-EO-112	B-CR112	B-EI-8		B-EI-56		B-EI-104		B-EI-152	
A-EO-17	A-CR17	A-EO-113	A-CR113	B-EO-17	B-CR17	B-EO-113	B-CR113	A-EI-9	R9	A-EI-57	R57	A-EI-105	R105	A-EI-153	R153
A-EO-18	A-CR18	A-EO-114	A-CR114	B-EO-18	B-CR18	B-EO-114	B-CR114	B-EI-9		B-EI-57		B-EI-105		B-EI-153	
A-EO-19	A-CR19	A-EO-115	A-CR115	B-EO-19	B-CR19	B-EO-115	B-CR115	A-EI-10	R10	A-EI-58	R58	A-EI-106	R106	A-EI-154	R154
A-EO-20	A-CR20	A-EO-116	A-CR116	B-EO-20	B-CR20	B-EO-116	B-CR116	B-EI-10		B-EI-58		B-EI-106		B-EI-154	
A-EO-21	A-CR21	A-EO-117	A-CR117	B-EO-21	B-CR21	B-EO-117	B-CR117	A-EI-11	R11	A-EI-59	R59	A-EI-107	R107	A-EI-155	R155
A-EO-22	A-CR22	A-EO-118	A-CR118	B-EO-22	B-CR22	B-EO-118	B-CR118	B-EI-11		B-EI-59		B-EI-107		B-EI-155	
A-EO-23	A-CR23	A-EO-119	A-CR119	B-EO-23	B-CR23	B-EO-119	B-CR119	A-EI-12	R12	A-EI-60	R60	A-EI-108	R108	A-EI-156	R156
A-EO-24	A-CR24	A-EO-120	A-CR120	B-EO-24	B-CR24	B-EO-120	B-CR120	B-EI-12		B-EI-60		B-EI-108		B-EI-156	
A-EO-25	A-CR25	A-EO-121	A-CR121	B-EO-25	B-CR25	B-EO-121	B-CR121	A-EI-13	R13	A-EI-61	R61	A-EI-109	R109	A-EI-157	R157
A-EO-26	A-CR26	A-EO-122	A-CR122	B-EO-26	B-CR26	B-EO-122	B-CR122	B-EI-13		B-EI-61		B-EI-109		B-EI-157	
A-EO-27	A-CR27	A-EO-123	A-CR123	B-EO-27	B-CR27	B-EO-123	B-CR123	A-EI-14	R14	A-EI-62	R62	A-EI-110	R110	A-EI-158	R158
A-EO-28	A-CR28	A-EO-124	A-CR124	B-EO-28	B-CR28	B-EO-124	B-CR124	B-EI-14		B-EI-62		B-EI-110		B-EI-158	
A-EO-29	A-CR29	A-EO-125	A-CR125	B-EO-29	B-CR29	B-EO-125	B-CR125	A-EI-15	R15	A-EI-63	R63	A-EI-111	R111	A-EI-159	R159
A-EO-30	A-CR30	A-EO-126	A-CR126	B-EO-30	B-CR30	B-EO-126	B-CR126	B-EI-15		B-EI-63		B-EI-111		B-EI-159	
A-EO-31	A-CR31	A-EO-127	A-CR127	B-EO-31	B-CR31	B-EO-127	B-CR127	A-EI-16	R16	A-EI-64	R64	A-EI-112	R112	A-EI-160	R160
A-EO-32	A-CR32	A-EO-128	A-CR128	B-EO-32	B-CR32	B-EO-128	B-CR128	B-EI-16		B-EI-64		B-EI-112		B-EI-160	
A-EO-33	A-CR33	A-EO-129	A-CR129	B-EO-33	B-CR33	B-EO-129	B-CR129	A-EI-17	R17	A-EI-65	R65	A-EI-113	R113	A-EI-161	R161
A-EO-34	A-CR34	A-EO-130	A-CR130	B-EO-34	B-CR34	B-EO-130	B-CR130	B-EI-17		B-EI-65		B-EI-113		B-EI-161	
A-EO-35	A-CR35	A-EO-131	A-CR131	B-EO-35	B-CR35	B-EO-131	B-CR131	A-EI-18	R18	A-EI-66	R66	A-EI-114	R114	A-EI-162	R162
A-EO-36	A-CR36	A-EO-132	A-CR132	B-EO-36	B-CR36	B-EO-132	B-CR132	B-EI-18		B-EI-66		B-EI-114		B-EI-162	
A-EO-37	A-CR37	A-EO-133	A-CR133	B-EO-37	B-CR37	B-EO-133	B-CR133	A-EI-19	R19	A-EI-67	R67	A-EI-115	R115	A-EI-163	R163
A-EO-38	A-CR38	A-EO-134	A-CR134	B-EO-38	B-CR38	B-EO-134	B-CR134	B-EI-19		B-EI-67		B-EI-115		B-EI-163	
A-EO-39	A-CR39	A-EO-135	A-CR135	B-EO-39	B-CR39	B-EO-135	B-CR135	A-EI-20	R20	A-EI-68	R68	A-EI-116	R116	A-EI-164	R164
A-EO-40	A-CR40	A-EO-136	A-CR136	B-EO-40	B-CR40	B-EO-136	B-CR136	B-EI-20		B-EI-68		B-EI-116		B-EI-164	
A-EO-41	A-CR41	A-EO-137	A-CR137	B-EO-41	B-CR41	B-EO-137	B-CR137	A-EI-21	R21	A-EI-69	R69	A-EI-117	R117	A-EI-165	R165
A-EO-42	A-CR42	A-EO-138	A-CR138	B-EO-42	B-CR42	B-EO-138	B-CR138	B-EI-21		B-EI-69		B-EI-117		B-EI-165	
A-EO-43	A-CR43	A-EO-139	A-CR139	B-EO-43	B-CR43	B-EO-139	B-CR139	A-EI-22	R22	A-EI-70	R70	A-EI-118	R118	A-EI-166	R166
A-EO-44	A-CR44	A-EO-140	A-CR140	B-EO-44	B-CR44	B-EO-140	B-CR140	B-EI-22		B-EI-70		B-EI-118		B-EI-166	
A-EO-45	A-CR45	A-EO-141	A-CR141	B-EO-45	B-CR45	B-EO-141	B-CR141	A-EI-23	R23	A-EI-71	R71	A-EI-119	R119	A-EI-167	R167
A-EO-46	A-CR46	A-EO-142	A-CR142	B-EO-46	B-CR46	B-EO-142	B-CR142	B-EI-23		B-EI-71		B-EI-119		B-EI-167	
A-EO-47	A-CR47	A-EO-143	A-CR143	B-EO-47	B-CR47	B-EO-143	B-CR143	A-EI-24	R24	A-EI-72	R72	A-EI-120	R120	A-EI-168	R168
A-EO-48	A-CR48	A-EO-144	A-CR144	B-EO-48	B-CR48	B-EO-144	B-CR144	B-EI-24		B-EI-72		B-EI-120		B-EI-168	
A-EO-49	A-CR49	A-EO-145	A-CR145	B-EO-49	B-CR49	B-EO-145	B-CR145	A-EI-25	R25	A-EI-73	R73	A-EI-121	R121	A-EI-169	R169
A-EO-50	A-CR50	A-EO-146	A-CR146	B-EO-50	B-CR50	B-EO-146	B-CR146	B-EI-25		B-EI-73		B-EI-121		B-EI-169	
A-EO-51	A-CR51	A-EO-147	A-CR147	B-EO-51	B-CR51	B-EO-147	B-CR147	A-EI-26	R26	A-EI-74	R74	A-EI-122	R122	A-EI-170	R170
A-EO-52	A-CR52	A-EO-148	A-CR148	B-EO-52	B-CR52	B-EO-148	B-CR148	B-EI-26		B-EI-74		B-EI-122		B-EI-170	
A-EO-53	A-CR53	A-EO-149	A-CR149	B-EO-53	B-CR53	B-EO-149	B-CR149	A-EI-27	R27	A-EI-75	R75	A-EI-123	R123	A-EI-171	R171
A-EO-54	A-CR54	A-EO-150	A-CR150	B-EO-54	B-CR54	B-EO-150	B-CR150	B-EI-27		B-EI-75		B-EI-123		B-EI-171	
A-EO-55	A-CR55	A-EO-151	A-CR151	B-EO-55	B-CR55	B-EO-151	B-CR151	A-EI-28	R28	A-EI-76	R76	A-EI-124	R124	A-EI-172	R172
A-EO-56	A-CR56	A-EO-152	A-CR152	B-EO-56	B-CR56	B-EO-152	B-CR152	B-EI-28		B-EI-76		B-EI-124		B-EI-172	
A-EO-57	A-CR57	A-EO-153	A-CR153	B-EO-57	B-CR57	B-EO-153	B-CR153	A-EI-29	R29	A-EI-77	R77	A-EI-125	R125	A-EI-173	R173
A-EO-58	A-CR58	A-EO-154	A-CR154	B-EO-58	B-CR58	B-EO-154	B-CR154	B-EI-29		B-EI-77		B-EI-125		B-EI-173	
A-EO-59	A-CR59	A-EO-155	A-CR155	B-EO-59	B-CR59	B-EO-155	B-CR155	A-EI-30	R30	A-EI-78	R78	A-EI-126	R126	A-EI-174	R174
A-EO-60	A-CR60	A-EO-156	A-CR156	B-EO-60	B-CR60	B-EO-156	B-CR156	B-EI-30		B-EI-78		B-EI-126		B-EI-174	
A-EO-61	A-CR61	A-EO-157	A-CR157	B-EO-61	B-CR61	B-EO-157	B-CR157	A-EI-31	R31	A-EI-79	R79	A-EI-127	R127	A-EI-175	R175
A-EO-62	A-CR62	A-EO-158	A-CR158	B-EO-62	B-CR62	B-EO-158	B-CR158	B-EI-31		B-EI-79		B-EI-127		B-EI-175	
A-EO-63	A-CR63	A-EO-159	A-CR159	B-EO-63	B-CR63	B-EO-159	B-CR159	A-EI-32	R32	A-EI-80	R80	A-EI-128	R128	A-EI-176	R176
A-EO-64	A-CR64	A-EO-160	A-CR160	B-EO-64	B-CR64	B-EO-160	B-CR160	B-EI-32		B-EI-80		B-EI-128		B-EI-176	
A-EO-65	A-CR65	A-EO-161	A-CR161	B-EO-65	B-CR65	B-EO-161	B-CR161	A-EI-33	R33	A-EI-81	R81	A-EI-129	R129	A-EI-177	R177
A-EO-66	A-CR66	A-EO-162	A-CR162	B-EO-66	B-CR66	B-EO-162	B-CR162	B-EI-33		B-EI-81		B-EI-129		B-EI-177	
A-EO-67	A-CR67	A-EO-163	A-CR163	B-EO-67	B-CR67	B-EO-163	B-CR163	A-EI-34	R34	A-EI-82	R82	A-EI-130	R130	A-EI-178	R178
A-EO-68	A-CR68	A-EO-164	A-CR164	B-EO-68	B-CR68	B-EO-164	B-CR164	B-EI-34		B-EI-82		B-EI-130		B-EI-178	
A-EO-69	A-CR69	A-EO-165	A-CR165	B-EO-69	B-CR69	B-EO-165	B-CR165	A-EI-35	R35	A-EI-83	R83	A-EI-131	R131	A-EI-179	R179
A-EO-70	A-CR70	A-EO-166	A-CR166	B-EO-70	B-CR70	B-EO-166	B-CR166	B-EI-35		B-EI-83		B-EI-131		B-EI-179	
A-EO-71	A-CR71	A-EO-167	A-CR167	B-EO-71	B-CR71	B-EO-167	B-CR167	A-EI-36	R36	A-EI-84	R84	A-EI-132	R132	A-EI-180	R180
A-EO-72	A-CR72	A-EO-168	A-CR168	B-EO-72	B-CR72	B-EO-168	B-CR168	B-EI-36		B-EI-84		B-EI-132		B-EI-180	
A-EO-73	A-CR73	A-EO-169	A-CR169	B-EO-73	B-CR73	B-EO-169	B-CR169	A-EI-37	R37	A-EI-85	R85	A-EI-133	R133	A-EI-181	R181
A-EO-74	A-CR74	A-EO-170	A-CR170	B-EO-74	B-CR74	B-EO-170	B-CR170	B-EI-37		B-EI-85		B-EI-133		B-EI-181	
A-EO-75	A-CR75	A-EO-171	A-CR171	B-EO-75	B-CR75	B-EO-171	B-CR171	A-EI-38	R38	A-EI-86	R86	A-EI-134	R134	A-EI-182	R182
A-EO-76	A-CR76	A-EO-172	A-CR172	B-EO-76	B-CR76	B-EO-172	B-CR172	B-EI-38		B-EI-86		B-EI-134		B-EI-182	
A-EO-77	A-CR77	A-EO-173	A-CR173	B-EO-77	B-CR77	B-EO-173	B-CR173	A-EI-39	R39	A-EI-87	R87	A-EI-135	R135	A-EI-183	R183
A-EO-78	A-CR78	A-EO-174	A-CR174	B-EO-78	B-CR78	B-EO-174	B-CR174	B-EI-39		B-EI-87		B-EI-135		B-EI-183	
A-EO-79	A-CR79	A-EO-175	A-CR175	B-EO-79	B-CR79	B-EO-175	B-CR175	A-EI-40	R40	A-EI-88	R88	A-EI-136	R136	A-EI-184	R184
A-EO-80	A-CR80	A-EO-176	A-CR176	B-EO-80	B-CR80	B-EO-176	B-CR176	B-EI-40		B-EI-88		B-EI-136		B-EI-184	
A-EO-81	A-CR81	A-EO-177	A-CR177	B-EO-81	B-CR81	B-EO-177	B-CR177	A-EI-41	R41	A-EI-89	R89	A-EI-137	R137	A-EI-185	R185
A-EO-82	A-CR82	A-EO-178	A-CR178	B-EO-82	B-CR82	B-EO-178	B-CR178	B-EI-41		B-EI-89		B-EI-137		B-EI-185	
A-EO-83	A-CR83	A-EO-179	A-CR179	B-EO-83	B-CR83	B-EO-179	B-CR179	A-EI-42	R42	A-EI-90	R90	A-EI-138	R138	A-EI-186	R186
A-EO-84	A-CR84	A-EO-180	A-CR180	B-EO-84	B-CR84	B-EO-180	B-CR180	B-EI-42		B-EI-90		B-EI-138		B-EI-186	
A-EO-85	A-CR85	A-EO-181	A-CR181	B-EO-85	B-CR85	B-EO-181	B-CR181	A-EI-43	R43	A-EI-91	R91	A-EI-139	R139	A-EI-187	R187
A-EO-86	A-CR86	A-EO-182	A-CR182	B-EO-86	B-CR86	B-EO-182	B-CR182	B-EI-43		B-EI-91		B-EI-139		B-EI-187	
A-EO-87	A-CR87	A-EO-183	A-CR183	B-EO-87	B-CR87	B-EO-183	B-CR183	A-EI-44	R44	A-EI-92	R92	A-EI-140	R140	A-EI-188	R188
A-EO-88	A-CR88	A-EO-184	A-CR184	B-EO-88	B-CR88	B-EO-184	B-CR184	B-EI-44		B-EI-92		B-EI-140		B-EI-188	
A-EO-89	A-CR89	A-EO-185	A-CR185	B-EO-89	B-CR89	B-EO-185	B-CR185	A-EI-45	R45	A-EI-93	R93	A-EI-141	R141	A-EI-189	R189
A-EO-90	A-CR90	A-EO-186	A-CR186	B-EO-90	B-CR90	B-EO-186	B-CR186	B-EI-45		B-EI-93		B-EI-141		B-EI-189	
A-EO-91	A-CR91	A-EO-187	A-CR187	B-EO-91	B-CR91	B-EO-187	B-CR187	A-EI-46	R46	A-EI-94	R94	A-EI-142	R142	A-EI-190	R190
A-EO-92	A-CR92	A-EO-188	A-CR188	B-EO-92	B-CR92	B-EO-188	B-CR188	B-EI-46		B-EI-94		B-EI-142		B-EI-190	
A-EO-93	A-CR93	A-EO-189	A-CR189	B-EO-93	B-CR93	B-EO-189	B-CR189	A-EI-47	R47	A-EI-95	R95	A-EI-143	R143	A-EI-191	R191
A-EO-94	A-CR94	A-EO-190	A-CR190	B-EO-94	B-CR94	B-EO-190	B-CR190	B-EI-47		B-EI-95		B-EI-143		B-EI-191	
A-EO-95	A-CR95	A-EO-191	A-CR191	B-EO-95	B-CR95	B-EO-191	B-CR191	A-EI-48	R48	A-EI-96	R96	A-EI-144	R144	A-EI-192	R192
A-EO-96	A-CR96	A-EO-192	A-CR192	B-EO-96	B-CR96	B-EO-192	B-CR192	B-EI-48		B-EI-96		B-EI-144		B-EI-192	

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED NASA
APPROVED MSC
DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

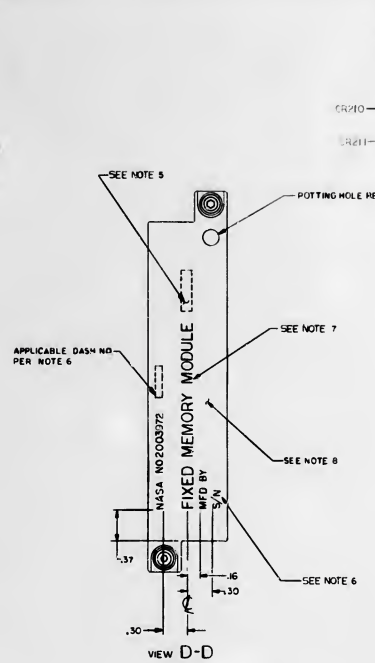
FIXED MEMORY MODULE ASSEMBLY

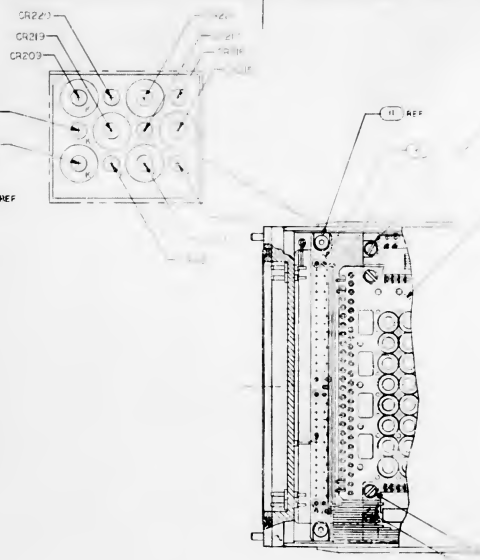
CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003[illegible]72

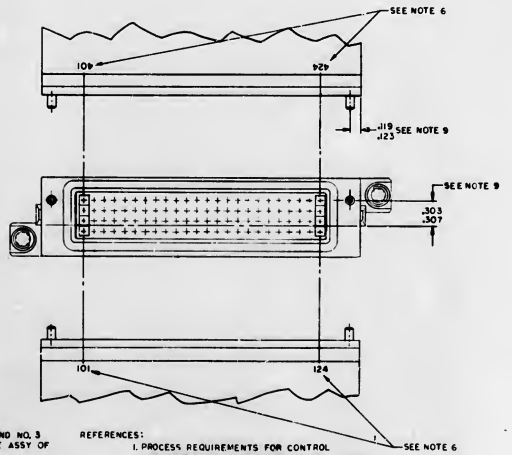
SCALE NONE — SHEET 3 OF 3

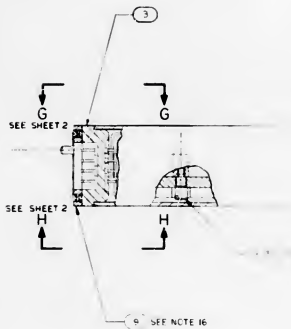
AF

PART NO.	MODULE NO.	FIND NO. 1	FIND NO. 2	MODULE DECK NO.	NEXT ASSEMBLY NO. (REF)
2003972-011	B1	2003060-061	2003061-061	0205	2021101
2003972-021	B2	2003060-071	2003061-071	0206	2021101
2003972-031	B3	2003060-081	2003061-081	0207	2021101
2003972-041	B1	2003060-121	2003061-121	0210	2021104
2003972-051	B2	2003060-131	2003061-131	0211	2021104
2003972-061	B3	2003060-141	2003061-141	0212	2021104
2003972-071	B2	2003060-151	2003061-151	0213	2021104
2003972-081	B3	2003060-161	2003061-161	0214	2021104
2003972-091	B2	2003060-171	2003061-171	0215	2021101
2003972-111	B3	2003060-181	2003061-181	0216	2021101
2003972-121	B1	2003060-091	2003061-091	C208	2021105-031
2003972-131	B2	2003060-111	2003061-111	C209	2021105-031
2003972-141	B1	2003060-191	2003061-191	0217	2021106-011
2003972-151	B2	2003060-211	2003061-211	0218	2021106-011
2003972-161	B3	2003060-221	2003061-221	0219	2021106-011
2003972-171	B4	2003060-231	2003061-231	0220	2021106-011
2003972-181	B5	2003060-241	2003061-241	0221	2021106-011
2003972-191	B6	2003060-251	2003061-251	0222	2021106-011
2003972-211	B3	2003060-261	2003061-261	0223	2021104-041
[illegible]	[illegible]	[illegible]	[illegible]	0224	2021105-041
[illegible]	B1	2003060-281	2003061-281	0225	2021106-021
2003972-241	B3	2003060-291	2003061-291	0226	2021106-021
2003972-251	B5	2003060-311	2003061-311	0227	2021106-021
[illegible]	B1	2003060-321	2003061-321	0228	2021107-011
[illegible]	B2	2003060-331	2003061-331	0229	2021107-011



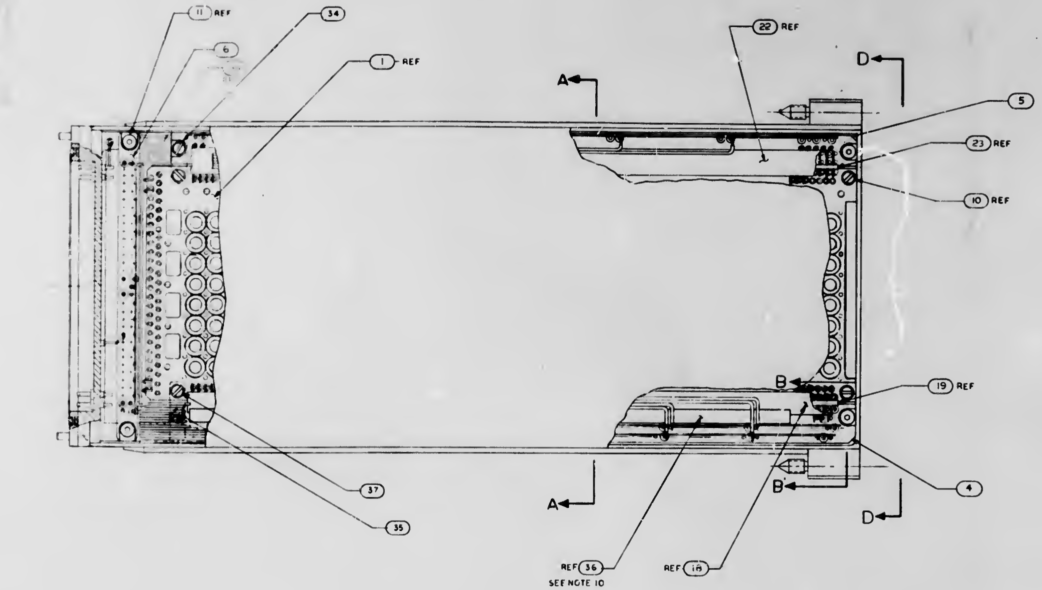


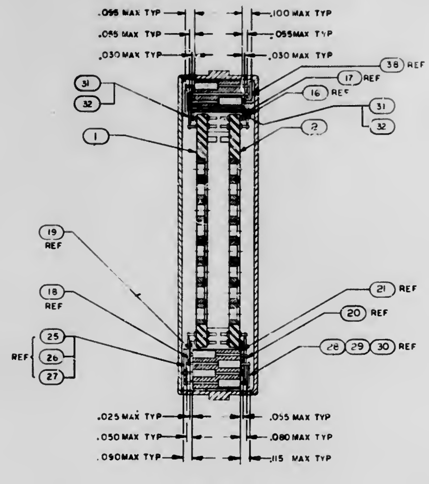




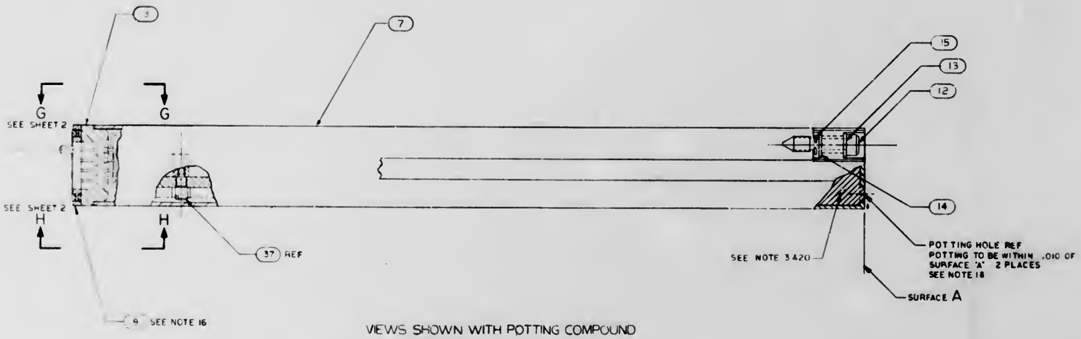
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70827
2. UNLESS OTHERWISE SPECIFIED ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
3. ENCAPSULATE MODULE PER ND1002226 METHOD II
4. WELD PER ND1002005
5. MARK APPROPRIATE MODULE NO. AS SHOWN IN CHART
6. MARK .08 /.06 HIGH PER ND1002019 AND ND1002122 TYPE II CLASS 2 AND SERIALIZE PER ND 1002023 USING INK 1006271-1
7. MARK .14 /.10 HIGH PER ND1002019 AND ND1002122 TYPE II CLASS 2 USING INK 1006271-1
8. PAINT INDICATED SURFACES OF FIND NO 7. PER ND1002279 WITH SCD NO.1008809-1 DARK GREY EPOXY RESIN ENAMEL, FINAL COAT PER ND1002277 USING 1012543-003
9. ASSEMBLE FIND NO.7 AND FIND NO.3 TO DIMENSIONS SHOWN
10. REMOVE LINER FROM NEARSIDE OF FIND NO.36 AND ASSEMBLE 3 PLACES AS SHOWN. FIND NO.36 MUST INSULATE FLAT CABLES FROM TRIMMED COMPONENT LEADS - TRIM AS REQUIRED
11. WHITE DOT AND SINGLE SOLID LEAD DENOTES FIRST LEVEL WIRING UNLESS OTHERWISE SPECIFIED
12. BLACK DOT AND SINGLE SOLID LEAD DENOTES SECOND LEVEL WIRING
13. BLACK DOT AND CROSS HATCHED LEAD DENOTES THIRD LEVEL WIRING
14. ALL LEADS FROM FIND NO.1 AND FIND NO.2 TO FIND NO.3 TO BE THIRD LEVEL WIRING
15. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003972 FOR -1214-17 CONFIGURATIONS USE PS 2003960
16. FIND NO.9 TO BE SHIPPED UNASSEMBLED AND IDENTIFIED PER ND 1002019
17. SEAL PINS AND INSULATORS TO FIND NO. 3 PER ND1002004 TYPE III BEFORE ASSY OF FIND NO. 6
18. FILL AS SHOWN PER ND1002235 METHOD A
19. BOND FIND NO.39 TO FIND NO.3 PER ND1002004 TYPE VI AFTER ASSY OF FIND NO.6
20. PRIOR TO ENCAPSULATION PER NOTE 3, COAT OVER ALL TERMINALS OF FIND NO'S 1,2&3 AND OVER ALL WIRES, SLEEVING AND COMPONENT LEADS OF FIND NO'S 4,5,6,15,16,19,20,21,22,23,24, 25,26,27,28,29,30,31,32,33,38 &39 WITH A .05 MAXIMUM THICKNESS OF SILICONE RUBBER PER ND1002009, METHOD A. MASK ALL OUTSIDE SURFACES OF FIND NO.3 AND ALL OTHER SURFACES OF THIS ASSEMBLY COMING IN CLOSE CONTACT WITH FIND NO.7

REFERENCES:
1. PROCESS REQUIREMENTS FOR CONTROL AND INSPECTION OF ROPE MEMORY ASSEMBLIES ND1002285
2. FIXED MEMORY FIXTURE DWG. NO.AP22500

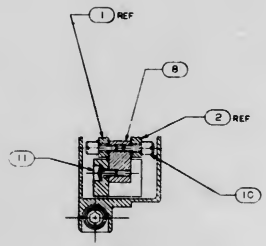




SECTION A-A



VIEWS SHOWN WITH POTTING COMPOUND PARTIALLY REMOVED



SECTION B-B

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
1	2003486-021	COMPONENT BLOCK	10
X	2005935	SCHEMATIC	REF
1	2004684	FLAT CABLE	38
4	2004150 — 003	SCREW, SHOULDERED	37
AR	1006806 — 26	INSULATION TAPE, ELECTRICAL	36
1	2004150 — 001	SCREW, SHOULDERED	35
1	2004150 — 002	SCREW, SHOULDERED	34
1	2004129	FLAT CABLE INTERCONNECTION	33
AR	1006776-25	SLEEVING	32
AR	1006757-12	WIRE, ELECRICAL	31
1	2004125	FLAT CABLE	30
1	2004122	FLAT CABLE	29
1	2004124	FLAT CABLE	28
1	2004123	FLAT CABLE	27
1	2004121	FLAT CABLE	26
1	2004120	FLAT CABLE	25
1	2004685	FLAT CABLE	24
1	2003051 — 013	MATRIX ASSY	23
1	2003051 — 014	MATRIX ASSY	22
8	2003051 — 016	MATRIX ASSY	21
8	2003051 — 015	MATRIX ASSY	20
1	2003051 — 017	MATRIX ASSY	19
1	2003051 — 018	MATRIX ASSY	18
1	2003051 — 011	MATRIX ASSY	17
1	2003051 — 012	MATRIX ASSY	16
2	MS16633-4015	E RING	15
2	1004546-3	WASHER	14
2	1004546-1	WASHER	13
2	1004579-1	SCREW, JACKING	12
4	1000093-1	SCREW, BUTTONHEAD	11
4	2004151	SCREW, STANDOFF	10
1	1006339	GASKET PLATE	9
2	2004071	STANDOFF	8
1	2004100	HOUSING	7
1	2003048-021	RESISTOR-DIODE BLOCK ASSY	6
1	2003052-021	COMPONENT BLOCK RESISTOR ASSY	5
1	2003045-021	COMPONENT BLOCK DIODE ASSY	4
1	2003373-011	CONNECTOR PLATE ASSY	3
1	2003061-SEE CHART	SENSE WIRING ASSY SIDE B	2
1	2003060-SEE CHART	SENSE WIRING ASSY SIDE A	1

LIST OF MATERIALS

SEE NOTE 16

FOR APPLICABLE PARY NO. SEE CHART

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± — DECIMALS ±.02 ANGLES ± 2°

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

SEE CHART

NEXT ASSY | USED ON

APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN | CHECKED | APPROVAL | APPROVAL

NASA APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FIXED MEMORY MODULE ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003972

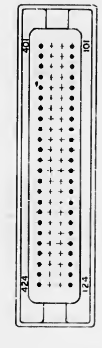
SCALE 2/1 | WT | SHEET 1 OF 3

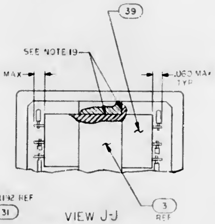
F-2/2

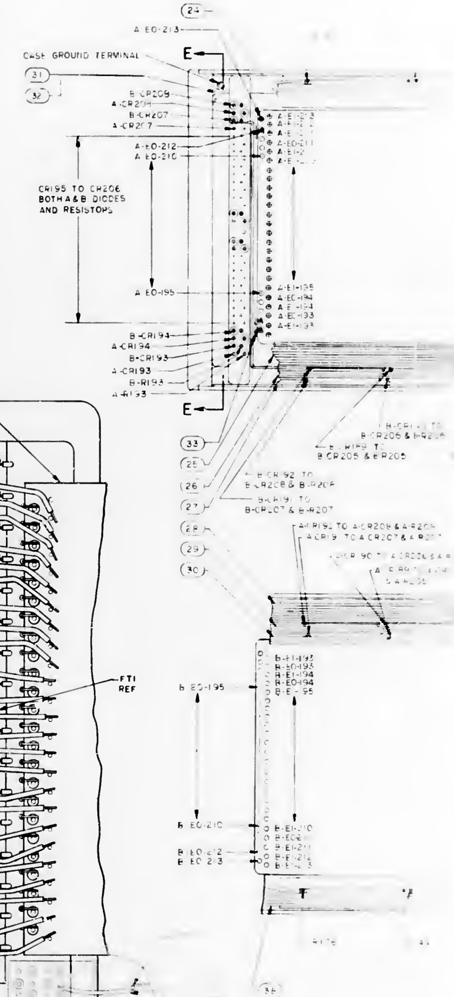
WIRE LIST			
PIN NO.	COMPONENT OR TERM. NO.	PIN NO.	COMPONENT OR TERM. NO.
101	A-EI-213	301	GROUND
102	A-EI-212	302	[illegible]
103	A-EI-211	303	CR210
104	A-EO-211	304	CR211
105	A-EI-210	305	[illegible]
106	A-EI-209	306	CR213
107	A-EI-208	307	CR214
108	A-EI-207	308	A-CR208
109	A-EI-206	309	A-CR207
110	A-EI-205	310	A-CR206
111	A-EI-204	311	A-CR205
112	A-EI-203	312	A-CR204
113	A-EI-202	313	A-CR203
114	A-EI-201	314	A-CR202
115	A-EI-200	315	A-CR201
116	A-EI-199	316	A-CR200
117	A-EI-198	317	A-CR199
118	A-EI-197	318	A-CR198
119	A-EI-196	319	A-CR197
120	A-EI-195	320	A-CR196
121	A-EO-194	321	A-CR195
122	A-EI-194	322	A-CR194
123	A-EO-193	323	A-CR193
124	A-EI-193	324	SPARE
201	B-R208	401	B-EI-213
202	[illegible]	402	B-EI-212
203	[illegible]	403	B-EI-211
204	[illegible]	404	B-EO-211
205	[illegible]	405	B-EI-210
206	[illegible]	406	B-EI-209
207	[illegible]	407	B-EI-208
208	B-CR208	408	B-EI-207
209	B-CR207	409	B-EI-206
210	B-CR206	410	B-EI-205
211	B-CR205	411	B-EI-204
212	B-CR204	412	B-EI-203
213	B-CR203	413	B-EI-202
214	B-CR202	414	B-EI-201
215	B-CR201	415	B-EI-200
216	B-CR200	416	B-EI-199
217	B-CR199	417	B-EI-198
218	B-CR198	418	B-EI-197
219	B-CR197	419	B-EI-196
220	B-CR196	420	B-EI-195
221	B-CR195	421	B-EO-194
222	B-CR194	422	B-EI-194
223	B-CR193	423	B-EO-193
224	SPARE	424	B-EI-193

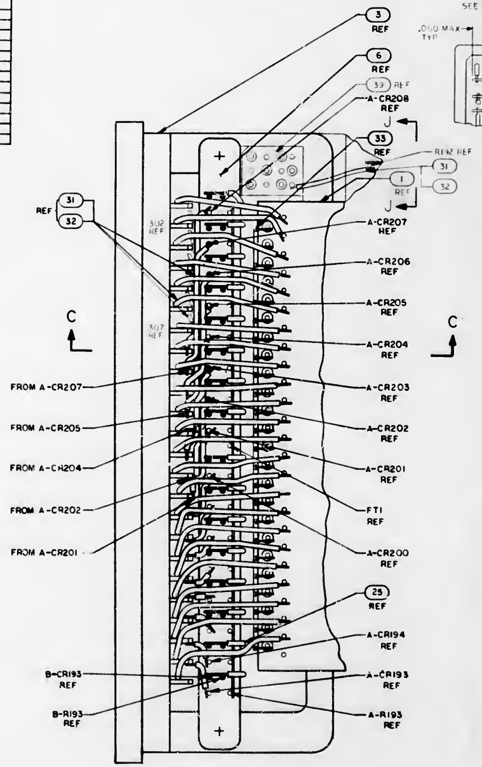
WIRE LIST	
TERMINAL NO.	TERMINAL NO.
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
SPARE	SPARE
A-EO-195	B-EO-195
A-EO-196	B-EO-196
A-EO-197	B-EO-197
A-EO-198	B-EO-198
A-EO-199	B-EO-199
A-EO-200	B-EO-200
A-EO-201	B-EO-201
A-EO-202	B-EO-202
A-EO-203	B-EO-203
A-EO-204	B-EO-204
A-EO-205	B-EO-205
A-EO-206	B-EO-206
A-EO-207	B-EO-207
A-EO-208	B-EO-208
A-EO-209	B-EO-209
A-EO-210	B-EO-210
SPARE	SPARE
SPARE	SPARE
A-EO-212	B-EO-212
A-EO-213	B-EO-213

WIRE LIST	
COMPONENT NO.	COMPONENT NO.
CR215	R176
CR216	R144
CR217	R112
CR218	R80
CR219	R48
CR220	R16
CR209	R32
CR210	R64
CR211	R96
CR212	R128
CR213	R160
CR214	R192

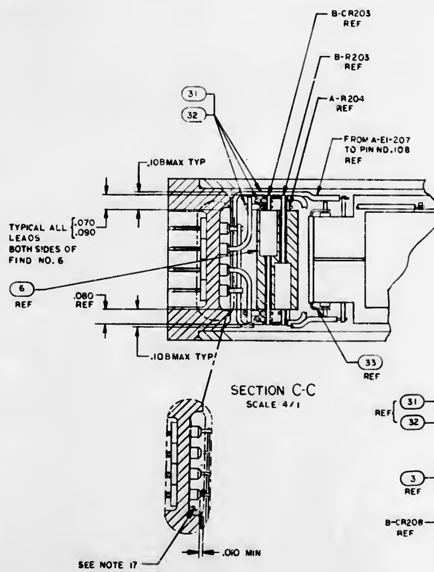




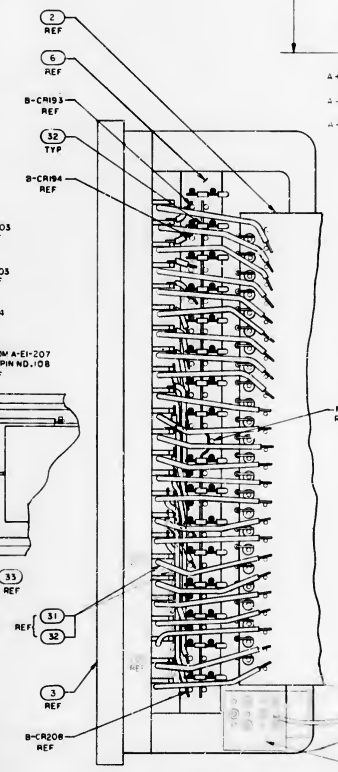




VIEW G-G
SCALE 4/1
SHOWN WITH POTTING AND FIND NO. 7 REMOVED. SEE NOTES 11,12,13 AND 14

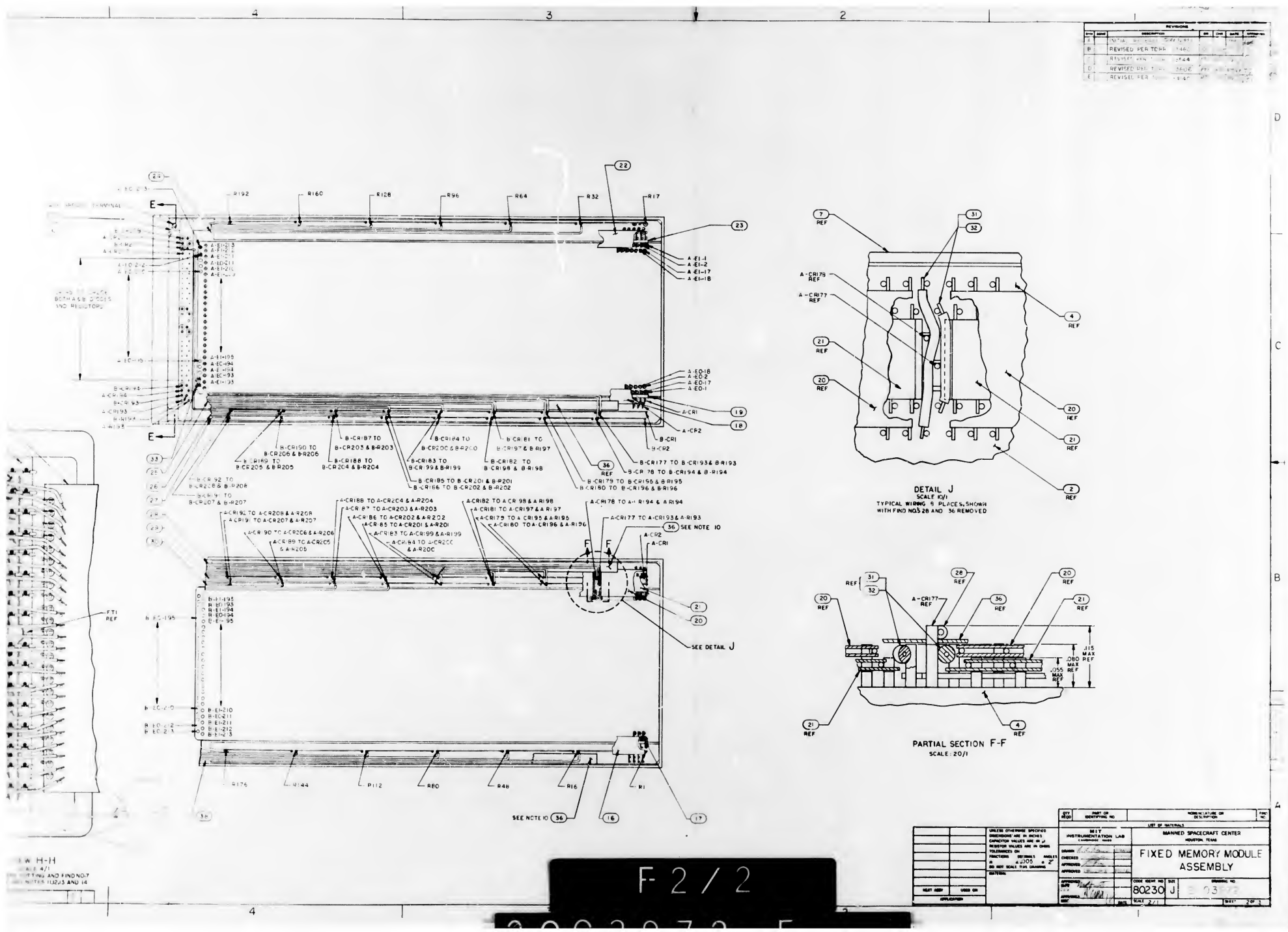


SECTION C-C
SCALE 4/1



VIEW H-H
SCALE 4/1
SHOWN WITH POTTING AND FIND NO. 7 REMOVED. SEE NOTES 11,12,13 AND 14

2003972 E



DETAIL J
SCALE: K/1
TYPICAL WIRING 6 PLACES, SHOWN WITH FIND NOS 28 AND 36 REMOVED

PARTIAL SECTION F-F
SCALE: 20/1

REVISIONS					
SYM	ZONE	DESCRIPTION	BY	CHK	DATE
A		INITIAL RELEASE			
B		REVISED PER TDRR 1460			
C		REVISED PER TDRR 1644			
D		REVISED PER TDRR 1646			
E		REVISED PER TDRR 1647			

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FSCM NO.
		LIST OF MATERIALS	

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FIXED MEMORY MODULE ASSEMBLY

CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003972

SCALE 2/1 SHEET 2 OF 3

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ±.005 ±
DO NOT SCALE THIS DRAWING
MATERIAL

NEXT ASSY USED ON
APPLICATION

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED DATE
APPROVED MIT

F-2/2


8
7
6
5
D
C
B
A
2003072 E

WIRE LIST

TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.	TERM. NO.	COMPONENT NO.
A-EO-1	A-CR1	A-EO-97	A-CR97	B-EO-1	B-CR1	B-EO-97	B-CR97	A-EI-1	R1	A-EI-49	R49	A-EI-97	R97	A-EI-145	R145
A-EO-2	A-CR2	A-EO-98	A-CR98	B-EO-2	B-CR2	B-EO-98	B-CR98	B-EI-1		B-EI-49		B-EI-97		B-EI-145	
A-EO-3	A-CR3	A-EO-99	A-CR99	B-EO-3	B-CR3	B-EO-99	B-CR99	A-EI-2	R2	A-EI-50	R50	A-EI-98	R98	A-EI-146	R146
A-EO-4	A-CR4	A-EO-100	A-CR100	B-EO-4	B-CR4	B-EO-100	B-CR100	B-EI-2		B-EI-50		B-EI-98		B-EI-146	
A-EO-5	A-CR5	A-EO-101	A-CR101	B-EO-5	B-CR5	B-EO-101	B-CR101	A-EI-3	R3	A-EI-51	R51	A-EI-99	R99	A-EI-147	R147
A-EO-6	A-CR6	A-EO-102	A-CR102	B-EO-6	B-CR6	B-EO-102	B-CR102	B-EI-3		B-EI-51		B-EI-99		B-EI-147	
A-EO-7	A-CR7	A-EO-103	A-CR103	B-EO-7	B-CR7	B-EO-103	B-CR103	A-EI-4	R4	A-EI-52	R52	A-EI-100	R100	A-EI-148	R148
A-EO-8	A-CR8	A-EO-104	A-CR104	B-EO-8	B-CR8	B-EO-104	B-CR104	B-EI-4		B-EI-52		B-EI-100		B-EI-148	
A-EO-9	A-CR9	A-EO-105	A-CR105	B-EO-9	B-CR9	B-EO-105	B-CR105	A-EI-5	R5	A-EI-53	R53	A-EI-101	R101	A-EI-149	R149
A-EO-10	A-CR10	A-EO-106	A-CR106	B-EO-10	B-CR10	B-EO-106	B-CR106	B-EI-5		B-EI-53		B-EI-101		B-EI-149	
A-EO-11	A-CR11	A-EO-107	A-CR107	B-EO-11	B-CR11	B-EO-107	B-CR107	A-EI-6	R6	A-EI-54	R54	A-EI-102	R102	A-EI-150	R150
A-EO-12	A-CR12	A-EO-108	A-CR108	B-EO-12	B-CR12	B-EO-108	B-CR108	B-EI-6		B-EI-54		B-EI-102		B-EI-150	
A-EO-13	A-CR13	A-EO-109	A-CR109	B-EO-13	B-CR13	B-EO-109	B-CR109	A-EI-7	R7	A-EI-55	R55	A-EI-103	R103	A-EI-151	R151
A-EO-14	A-CR14	A-EO-110	A-CR110	B-EO-14	B-CR14	B-EO-110	B-CR110	B-EI-7		B-EI-55		B-EI-103		B-EI-151	
A-EO-15	A-CR15	A-EO-111	A-CR111	B-EO-15	B-CR15	B-EO-111	B-CR111	A-EI-8	R8	A-EI-56	R56	A-EI-104	R104	A-EI-152	R152
A-EO-16	A-CR16	A-EO-112	A-CR112	B-EO-16	B-CR16	B-EO-112	B-CR112	B-EI-8		B-EI-56		B-EI-104		B-EI-152	
A-EO-17	A-CR17	A-EO-113	A-CR113	B-EO-17	B-CR17	B-EO-113	B-CR113	A-EI-9	R9	A-EI-57	R57	A-EI-105	R105	A-EI-153	R153
A-EO-18	A-CR18	A-EO-114	A-CR114	B-EO-18	B-CR18	B-EO-114	B-CR114	B-EI-9		B-EI-57		B-EI-105		B-EI-153	
A-EO-19	A-CR19	A-EO-115	A-CR115	B-EO-19	B-CR19	B-EO-115	B-CR115	A-EI-10	R10	A-EI-58	R58	A-EI-106	R106	A-EI-154	R154
A-EO-20	A-CR20	A-EO-116	A-CR116	B-EO-20	B-CR20	B-EO-116	B-CR116	B-EI-10		B-EI-58		B-EI-106		B-EI-154	
A-EO-21	A-CR21	A-EO-117	A-CR117	B-EO-21	B-CR21	B-EO-117	B-CR117	A-EI-11	R11	A-EI-59	R59	A-EI-107	R107	A-EI-155	R155
A-EO-22	A-CR22	A-EO-118	A-CR118	B-EO-22	B-CR22	B-EO-118	B-CR118	B-EI-11		B-EI-59		B-EI-107		B-EI-155	
A-EO-23	A-CR23	A-EO-119	A-CR119	B-EO-23	B-CR23	B-EO-119	B-CR119	A-EI-12	R12	A-EI-60	R60	A-EI-108	R108	A-EI-156	R156
A-EO-24	A-CR24	A-EO-120	A-CR120	B-EO-24	B-CR24	B-EO-120	B-CR120	B-EI-12		B-EI-60		B-EI-108		B-EI-156	
A-EO-25	A-CR25	A-EO-121	A-CR121	B-EO-25	B-CR25	B-EO-121	B-CR121	A-EI-13	R13	A-EI-61	R61	A-EI-109	R109	A-EI-157	R157
A-EO-26	A-CR26	A-EO-122	A-CR122	B-EO-26	B-CR26	B-EO-122	B-CR122	B-EI-13		B-EI-61		B-EI-109		B-EI-157	
A-EO-27	A-CR27	A-EO-123	A-CR123	B-EO-27	B-CR27	B-EO-123	B-CR123	A-EI-14	R14	A-EI-62	R62	A-EI-110	R110	A-EI-158	R158
A-EO-28	A-CR28	A-EO-124	A-CR124	B-EO-28	B-CR28	B-EO-124	B-CR124	B-EI-14		B-EI-62		B-EI-110		B-EI-158	
A-EO-29	A-CR29	A-EO-125	A-CR125	B-EO-29	B-CR29	B-EO-125	B-CR125	A-EI-15	R15	A-EI-63	R63	A-EI-111	R111	A-EI-159	R159
A-EO-30	A-CR30	A-EO-126	A-CR126	B-EO-30	B-CR30	B-EO-126	B-CR126	B-EI-15		B-EI-63		B-EI-111		B-EI-159	
A-EO-31	A-CR31	A-EO-127	A-CR127	B-EO-31	B-CR31	B-EO-127	B-CR127	A-EI-16	R16	A-EI-64	R64	A-EI-112	R112	A-EI-160	R160
A-EO-32	A-CR32	A-EO-128	A-CR128	B-EO-32	B-CR32	B-EO-128	B-CR128	B-EI-16		B-EI-64		B-EI-112		B-EI-160	
A-EO-33	A-CR33	A-EO-129	A-CR129	B-EO-33	B-CR33	B-EO-129	B-CR129	A-EI-17	R17	A-EI-65	R65	A-EI-113	R113	A-EI-161	R161
A-EO-34	A-CR34	A-EO-130	A-CR130	B-EO-34	B-CR34	B-EO-130	B-CR130	B-EI-17		B-EI-65		B-EI-113		B-EI-161	
A-EO-35	A-CR35	A-EO-131	A-CR131	B-EO-35	B-CR35	B-EO-131	B-CR131	A-EI-18	R18	A-EI-66	R66	A-EI-114	R114	A-EI-162	R162
A-EO-36	A-CR36	A-EO-132	A-CR132	B-EO-36	B-CR36	B-EO-132	B-CR132	B-EI-18		B-EI-66		B-EI-114		B-EI-162	
A-EO-37	A-CR37	A-EO-133	A-CR133	B-EO-37	B-CR37	B-EO-133	B-CR133	A-EI-19	R19	A-EI-67	R67	A-EI-115	R115	A-EI-163	R163
A-EO-38	A-CR38	A-EO-134	A-CR134	B-EO-38	B-CR38	B-EO-134	B-CR134	B-EI-19		B-EI-67		B-EI-115		B-EI-163	
A-EO-39	A-CR39	A-EO-135	A-CR135	B-EO-39	B-CR39	B-EO-135	B-CR135	A-EI-20	R20	A-EI-68	R68	A-EI-116	R116	A-EI-164	R164
A-EO-40	A-CR40	A-EO-136	A-CR136	B-EO-40	B-CR40	B-EO-136	B-CR136	B-EI-20		B-EI-68		B-EI-116		B-EI-164	
A-EO-41	A-CR41	A-EO-137	A-CR137	B-EO-41	B-CR41	B-EO-137	B-CR137	A-EI-21	R21	A-EI-69	R69	A-EI-117	R117	A-EI-165	R165
A-EO-42	A-CR42	A-EO-138	A-CR138	B-EO-42	B-CR42	B-EO-138	B-CR138	B-EI-21		B-EI-69		B-EI-117		B-EI-165	
A-EO-43	A-CR43	A-EO-139	A-CR139	B-EO-43	B-CR43	B-EO-139	B-CR139	A-EI-22	R22	A-EI-70	R70	A-EI-118	R118	A-EI-166	R166
A-EO-44	A-CR44	A-EO-140	A-CR140	B-EO-44	B-CR44	B-EO-140	B-CR140	B-EI-22		B-EI-70		B-EI-118		B-EI-166	
A-EO-45	A-CR45	A-EO-141	A-CR141	B-EO-45	B-CR45	B-EO-141	B-CR141	A-EI-23	R23	A-EI-71	R71	A-EI-119	R119	A-EI-167	R167
A-EO-46	A-CR46	A-EO-142	A-CR142	B-EO-46	B-CR46	B-EO-142	B-CR142	B-EI-23		B-EI-71		B-EI-119		B-EI-167	
A-EO-47	A-CR47	A-EO-143	A-CR143	B-EO-47	B-CR47	B-EO-143	B-CR143	A-EI-24	R24	A-EI-72	R72	A-EI-120	R120	A-EI-168	R168
A-EO-48	A-CR48	A-EO-144	A-CR144	B-EO-48	B-CR48	B-EO-144	B-CR144	B-EI-24		B-EI-72		B-EI-120		B-EI-168	
A-EO-49	A-CR49	A-EO-145	A-CR145	B-EO-49	B-CR49	B-EO-145	B-CR145	A-EI-25	R25	A-EI-73	R73	A-EI-121	R121	A-EI-169	R169
A-EO-50	A-CR50	A-EO-146	A-CR146	B-EO-50	B-CR50	B-EO-146	B-CR146	B-EI-25		B-EI-73		B-EI-121		B-EI-169	
A-EO-51	A-CR51	A-EO-147	A-CR147	B-EO-51	B-CR51	B-EO-147	B-CR147	A-EI-26	R26	A-EI-74	R74	A-EI-122	R122	A-EI-170	R170
A-EO-52	A-CR52	A-EO-148	A-CR148	B-EO-52	B-CR52	B-EO-148	B-CR148	B-EI-26		B-EI-74		B-EI-122		B-EI-170	
A-EO-53	A-CR53	A-EO-149	A-CR149	B-EO-53	B-CR53	B-EO-149	B-CR149	A-EI-27	R27	A-EI-75	R75	A-EI-123	R123	A-EI-171	R171
A-EO-54	A-CR54	A-EO-150	A-CR150	B-EO-54	B-CR54	B-EO-150	B-CR150	B-EI-27		B-EI-75		B-EI-123		B-EI-171	
A-EO-55	A-CR55	A-EO-151	A-CR151	B-EO-55	B-CR55	B-EO-151	B-CR151	A-EI-28	R28	A-EI-76	R76	A-EI-124	R124	A-EI-172	R172
A-EO-56	A-CR56	A-EO-152	A-CR152	B-EO-56	B-CR56	B-EO-152	B-CR152	B-EI-28		B-EI-76		B-EI-124		B-EI-172	
A-EO-57	A-CR57	A-EO-153	A-CR153	B-EO-57	B-CR57	B-EO-153	B-CR153	A-EI-29	R29	A-EI-77	R77	A-EI-125	R125	A-EI-173	R173
A-EO-58	A-CR58	A-EO-154	A-CR154	B-EO-58	B-CR58	B-EO-154	B-CR154	B-EI-29		B-EI-77		B-EI-125		B-EI-173	
A-EO-59	A-CR59	A-EO-155	A-CR155	B-EO-59	B-CR59	B-EO-155	B-CR155	A-EI-30	R30	A-EI-78	R78	A-EI-126	R126	A-EI-174	R174
A-EO-60	A-CR60	A-EO-156	A-CR156	B-EO-60	B-CR60	B-EO-156	B-CR156	B-EI-30		B-EI-78		B-EI-126		B-EI-174	
A-EO-61	A-CR61	A-EO-157	A-CR157	B-EO-61	B-CR61	B-EO-157	B-CR157	A-EI-31	R31	A-EI-79	R79	A-EI-127	R127	A-EI-175	R175
A-EO-62	A-CR62	A-EO-158	A-CR158	B-EO-62	B-CR62	B-EO-158	B-CR158	B-EI-31		B-EI-79		B-EI-127		B-EI-175	
A-EO-63	A-CR63	A-EO-159	A-CR159	B-EO-63	B-CR63	B-EO-159	B-CR159	A-EI-32	R32	A-EI-80	R80	A-EI-128	R128	A-EI-176	R176
A-EO-64	A-CR64	A-EO-160	A-CR160	B-EO-64	B-CR64	B-EO-160	B-CR160	B-EI-32		B-EI-80		B-EI-128		B-EI-176	
A-EO-65	A-CR65	A-EO-161	A-CR161	B-EO-65	B-CR65	B-EO-161	B-CR161	A-EI-33	R33	A-EI-81	R81	A-EI-129	R129	A-EI-177	R177
A-EO-66	A-CR66	A-EO-162	A-CR162	B-EO-66	B-CR66	B-EO-162	B-CR162	B-EI-33		B-EI-81		B-EI-129		B-EI-177	
A-EO-67	A-CR67	A-EO-163	A-CR163	B-EO-67	B-CR67	B-EO-163	B-CR163	A-EI-34	R34	A-EI-82	R82	A-EI-130	R130	A-EI-178	R178
A-EO-68	A-CR68	A-EO-164	A-CR164	B-EO-68	B-CR68	B-EO-164	B-CR164	B-EI-34		B-EI-82		B-EI-130		B-EI-178	
A-EO-69	A-CR69	A-EO-165	A-CR165	B-EO-69	B-CR69	B-EO-165	B-CR165	A-EI-35	R35	A-EI-83	R83	A-EI-131	R131	A-EI-179	R179
A-EO-70	A-CR70	A-EO-166	A-CR166	B-EO-70	B-CR70	B-EO-166	B-CR166	B-EI-35		B-EI-83		B-EI-131		B-EI-179	
A-EO-71	A-CR71	A-EO-167	A-CR167	B-EO-71	B-CR71	B-EO-167	B-CR167	A-EI-36	R36	A-EI-84	R84	A-EI-132	R132	A-EI-180	R180
A-EO-72	A-CR72	A-EO-168	A-CR168	B-EO-72	B-CR72	B-EO-168	B-CR168	B-EI-36		B-EI-84		B-EI-132		B-EI-180	
A-EO-73	A-CR73	A-EO-169	A-CR169	B-EO-73	B-CR73	B-EO-169	B-CR169	A-EI-37	R37	A-EI-85	R85	A-EI-133	R133	A-EI-181	R181
A-EO-74	A-CR74	A-EO-170	A-CR170	B-EO-74	B-CR74	B-EO-170	B-CR170	B-EI-37		B-EI-85		B-EI-133		B-EI-181	
A-EO-75	A-CR75	A-EO-171	A-CR171	B-EO-75	B-CR75	B-EO-171	B-CR171	A-EI-38	R38	A-EI-86	R86	A-EI-134	R134	A-EI-182	R182
A-EO-76	A-CR76	A-EO-172	A-CR172	B-EO-76	B-CR76	B-EO-172	B-CR172	B-EI-38		B-EI-86		B-EI-134		B-EI-182	
A-EO-77	A-CR77	A-EO-173	A-CR173	B-EO-77	B-CR77	B-EO-173	B-CR173	A-EI-39	R39	A-EI-87	R87	A-EI-135	R135	A-EI-183	R183
A-EO-78	A-CR78	A-EO-174	A-CR174	B-EO-78	B-CR78	B-EO-174	B-CR174	B-EI-39		B-EI-87		B-EI-135		B-EI-183	
A-EO-79	A-CR79	A-EO-175	A-CR175	B-EO-79	B-CR79	B-EO-175	B-CR175	A-EI-40	R40	A-EI-88	R88	A-EI-136	R136	A-EI-184	R184
A-EO-80	A-CR80	A-EO-176	A-CR176	B-EO-80	B-CR80	B-EO-176	B-CR176	B-EI-40		B-EI-88		B-EI-136		B-EI-184	
A-EO-81	A-CR81	A-EO-177	A-CR177	B-EO-81	B-CR81	B-EO-177	B-CR177	A-EI-41	R41	A-EI-89	R89	A-EI-137	R137	A-EI-185	R185
A-EO-82	A-CR82	A-EO-178	A-CR178	B-EO-82	B-CR82	B-EO-178	B-CR178	B-EI-41		B-EI-89		B-EI-137		B-EI-185	
A-EO-83	A-CR83	A-EO-179	A-CR179	B-EO-83	B-CR83	B-EO-179	B-CR179	A-EI-42	R42	A-EI-90	R90	A-EI-138	R138	A-EI-186	R186
A-EO-84	A-CR84	A-EO-180	A-CR180	B-EO-84	B-CR84	B-EO-180	B-CR180	B-EI-42		B-EI-90		B-EI-138		B-EI-186	
A-EO-85	A-CR85	A-EO-181	A-CR181	B-EO-85	B-CR85	B-EO-181	B-CR181	A-EI-43	R43	A-EI-91	R91	A-EI-139	R139	A-EI-187	R187
A-EO-86	A-CR86	A-EO-182	A-CR182	B-EO-86	B-CR86	B-EO-182	B-CR182	B-EI-43		B-EI-91		B-EI-139		B-EI-187	
A-EO-87	A-CR87	A-EO-183	A-CR183	B-EO-87	B-CR87	B-EO-183	B-CR183	A-EI-44	R44	A-EI-92	R92	A-EI-140	R140	A-EI-188	R188
A-EO-88	A-CR88	A-EO-184	A-CR184	B-EO-88	B-CR88	B-EO-184	B-CR184	B-EI-44		B-EI-92		B-EI-140		B-EI-188	
A-EO-89	A-CR89	A-EO-185	A-CR185	B-EO-89	B-CR89	B-EO-185	B-CR185	A-EI-45	R45	A-EI-93	R93	A-EI-141	R141	A-EI-189	R189
A-EO-90	A-CR90	A-EO-186	A-CR186	B-EO-90	B-CR90	B-EO-186	B-CR186	B-EI-45		B-EI-93		B-EI-141		B-EI-189	
A-EO-91	A-CR91	A-EO-187	A-CR187	B-EO-91	B-CR91	B-EO-187	B-CR187	A-EI-46	R46	A-EI-94	R94	A-EI-142	R142	A-EI-190	R190
A-EO-92	A-CR92	A-EO-188	A-CR188	B-EO-92	B-CR92	B-EO-188	B-CR188	B-EI-46		B-EI-94		B-EI-142		B-EI-190	
A-EO-93	A-CR93	A-EO-189	A-CR189	B-EO-93	B-CR93	B-EO-189	B-CR189	A-EI-47	R47	A-EI-95	R95	A-EI-143	R143	A-EI-191	R191
A-EO-94	A-CR94	A-EO-190	A-CR190	B-EO-94	B-CR94	B-EO-190	B-CR190	B-EI-47		B-EI-95		B-EI-143		B-EI-191	
A-EO-95	A-CR95	A-EO-191	A-CR191	B-EO-95	B-CR95	B-EO-191	B-CR191	A-EI-48	R48	A-EI-96	R96	A-EI-144	R144	A-EI-192	R192
A-EO-96	A-CR96	A-EO-192	A-CR192	B-EO-96	B-CR96	B-EO-192	B-CR192	B-EI-48		B-EI-96		B-EI-144		B-EI-192	

REVISIONS: REVISED PER TDRR [illegible]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

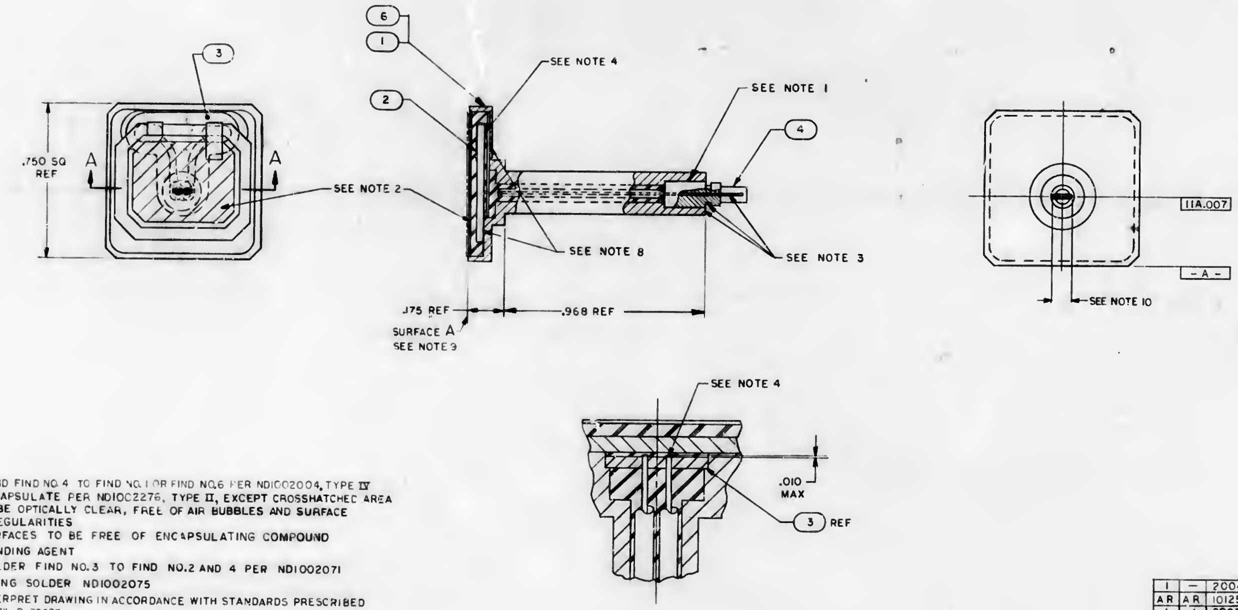
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FIXED MEMORY MODULE ASSEMBLY

CODE IDENT NO 80230 SIZE J

F-2/2

REVISIONS 21877						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 23127				
B		REVISED PER TDRR 27467	W.B.			
C		REVISED PER TDRR 27915			5-25-66	
D		REVISED PER TDRR 32580				
E		REVISED PER TDRR 32724				



PARTIAL SECTION A-A
SCALE 10/1

NOTES

1. BOND FIND NO.4 TO FIND NO.1 OR FIND NO.6 PER ND1002004, TYPE IV
2. ENCAPSULATE PER ND1002276, TYPE II, EXCEPT CROSSHATCHED AREA TO BE OPTICALLY CLEAR, FREE OF AIR BUBBLES AND SURFACE IRREGULARITIES
3. SURFACES TO BE FREE OF ENCAPSULATING COMPOUND BONDING AGENT
4. SOLDER FIND NO.3 TO FIND NO.2 AND 4 PER ND1002071 USING SOLDER ND1002075
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. IDENTIFY WITH PART NO. PER ND1002019
7. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003975
8. BOND FIND NO.2 AND 3 TO FIND NO.1 OR 6 USING FIND NO.5 OR PER ND1002004, TYPE IV
9. SURFACE OF ENCAPSULANT SHALL BE BETWEEN .010 MAX BELOW SURFACE A TO .005 MAX. ABOVE SURFACE A
10. REFERENCE .082/.087 REQUIRED ACROSS OUTSIDE EDGE OF WIRES.

1	—	2004678	SHAFT	6
AR	AR	1012536	ADHESIVE	5
1	1	2003932-011	PLUG, ASSY	4
1	1	1006371	CABLE ASSY, SPECIAL PURPOSE	3
1	1	1006340	PANEL, E/L	2
—	1	2004948	SHAFT	1
QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
-021	011	LIST OF MATERIALS		

NEXT ASSY	USED ON
2003875	
2003984	
2003974	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS

DRAWN J. A. Zaffini 6 JUL 65
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC
DATE

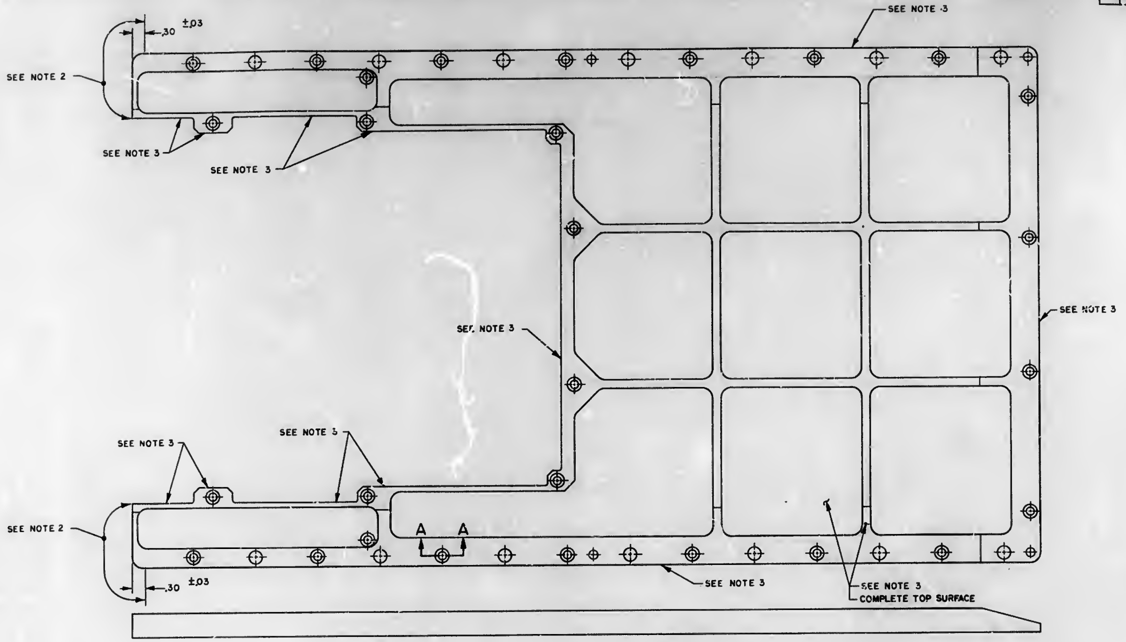
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

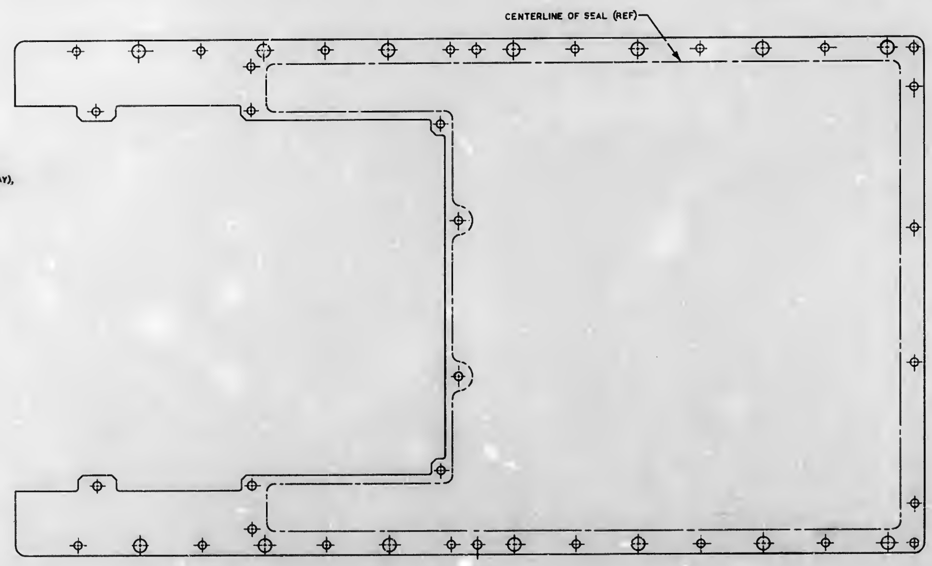
SHAFT ASSEMBLY
PUSH BUTTON SWITCH
AGC DSKY

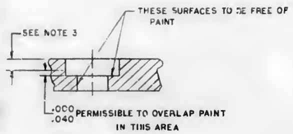
CODE IDENT NO 80230 | SIZE D | DRAWING NO 2003975
SCALE 4/1 | SHEET 1 OF 1

2003975 E

2003976







SECTION A-A
SCALE 4/1
28 PLACES

NOTES

1. MATL: MAKE FROM 1006378-001
2. PAINT THIS EDGE INCLUDING RADII PER ND1002279 USING 1008809-1 (DARK GRAY), FINAL COAT SURFACES PER ND1002277 USING 1012S43-003 OVERLAPPING THE AL FILLED CLEAR EPOXY PERMISSIBLE
3. APPLY THE FOLLOWING FINISHES TO SURFACES INDICATED
   PRIMER ONLY PER ND1002279 USING 1010992
   P NT AL FILLED CLEAR EPOXY PER ND1002289
4. IN ERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
5. MASK ALL HOLES, EXCEPT AS NOTED

MASTER

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
2003200	

APPLICATION

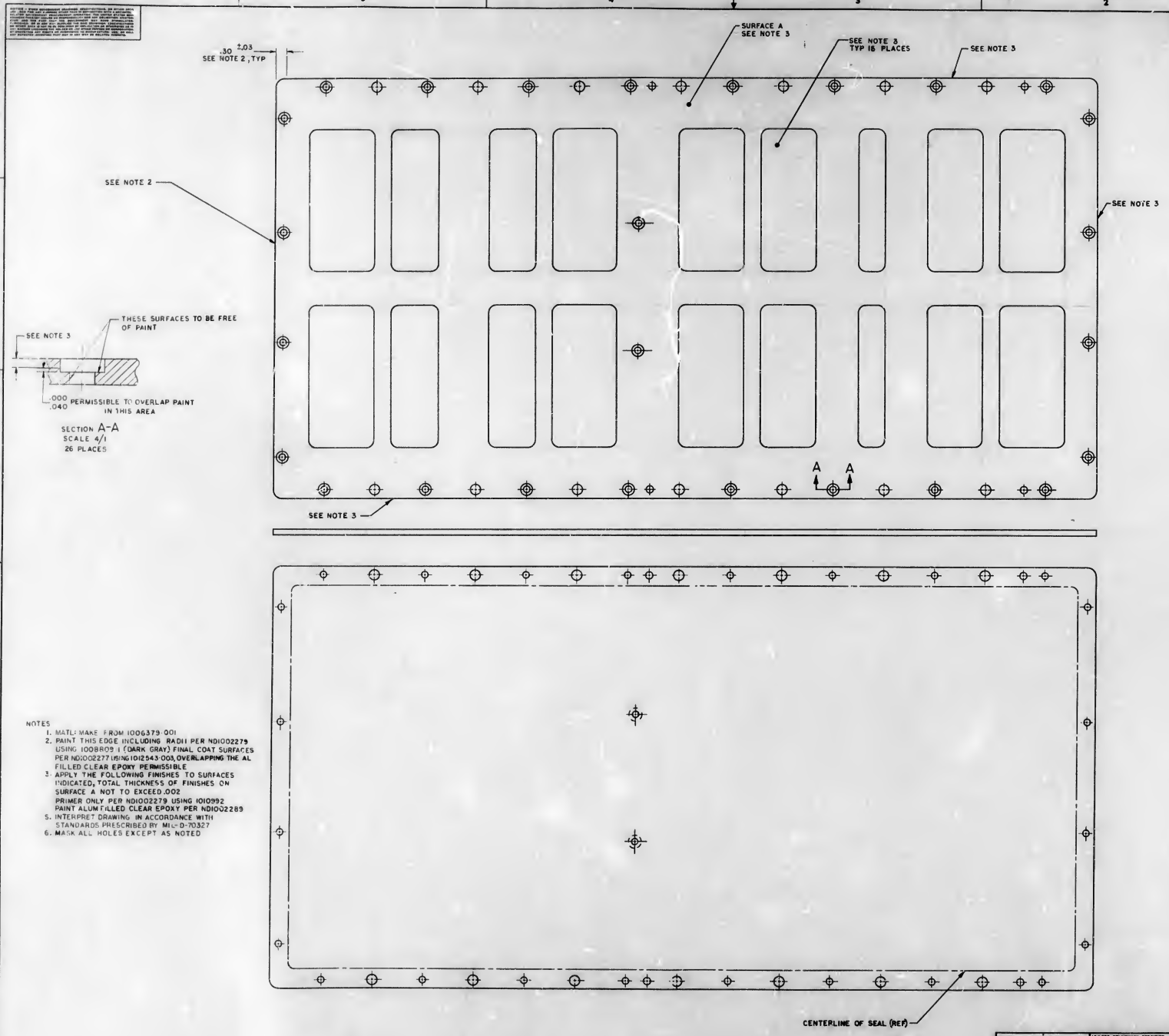
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 1
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN
CHECKED 24 FEB 66
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TRAY B COVER
PAINTED ASSEMBLY

CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO. 2003976
SCALE 1/1 | WT | SHEET 1 OF 1



NOTES

1. MATL: MAKE FROM 1006379-001
2. PAINT THIS EDGE INCLUDING RADII PER NDI002279 USING 1008R09 I (DARK GRAY) FINAL COAT SURFACES PER NDI002277 USING 1012543-003, OVERLAPPING THE AL FILLED CLEAR EPOXY PERMISSIBLE
3. APPLY THE FOLLOWING FINISHES TO SURFACES INDICATED, TOTAL THICKNESS OF FINISHES ON SURFACE A NOT TO EXCEED .002
   PRIMER ONLY PER NDI002279 USING 1010992
   PAINT ALUM FILLED CLEAR EPOXY PER NDI002289
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. MASK ALL HOLES EXCEPT AS NOTED

MASTER

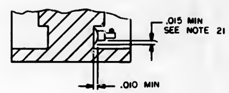
QTY PER	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	MIT INSTRUMENTATION LAB Cambridge, Mass.
DO NOT SCALE THIS DRAWING	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
MATERIAL SEE NOTE 1	TRAY A COVER PAINTED ASSEMBLY
HEAT TREATMENT	
FINAL FINISH	
NEXT ASSY 2003200 USED ON APPLICATION	CODE IDENT NO. 80230 SIZE E DWG NO. 2003977
	SCALE 1/1 WT SHEET 1 OF 1

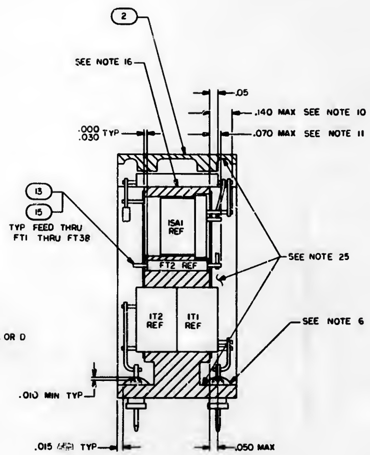
2003977 -

R9, R10	
PART NO.	VALUE
1006750 -25	510
-26	560
-27	620
-28	680
-29	750
-30	820
-31	910
-32	1K
-33	1.1K
-34	1.2K
-35	1.3K
-36	1.5K
-37	1.6K
-38	1.8K
-39	2.0K
-40	2.2K
-41	2.4K
-42	2.7K
-43	3.0K
-44	3.3K
-45	3.6K
-46	3.9K
-47	4.3K
-48	4.7K
-49	5.1K
-16	220
-17	240
-18	270
-19	300
-20	330
-21	360
-22	390
-23	430
1006750 -24	470

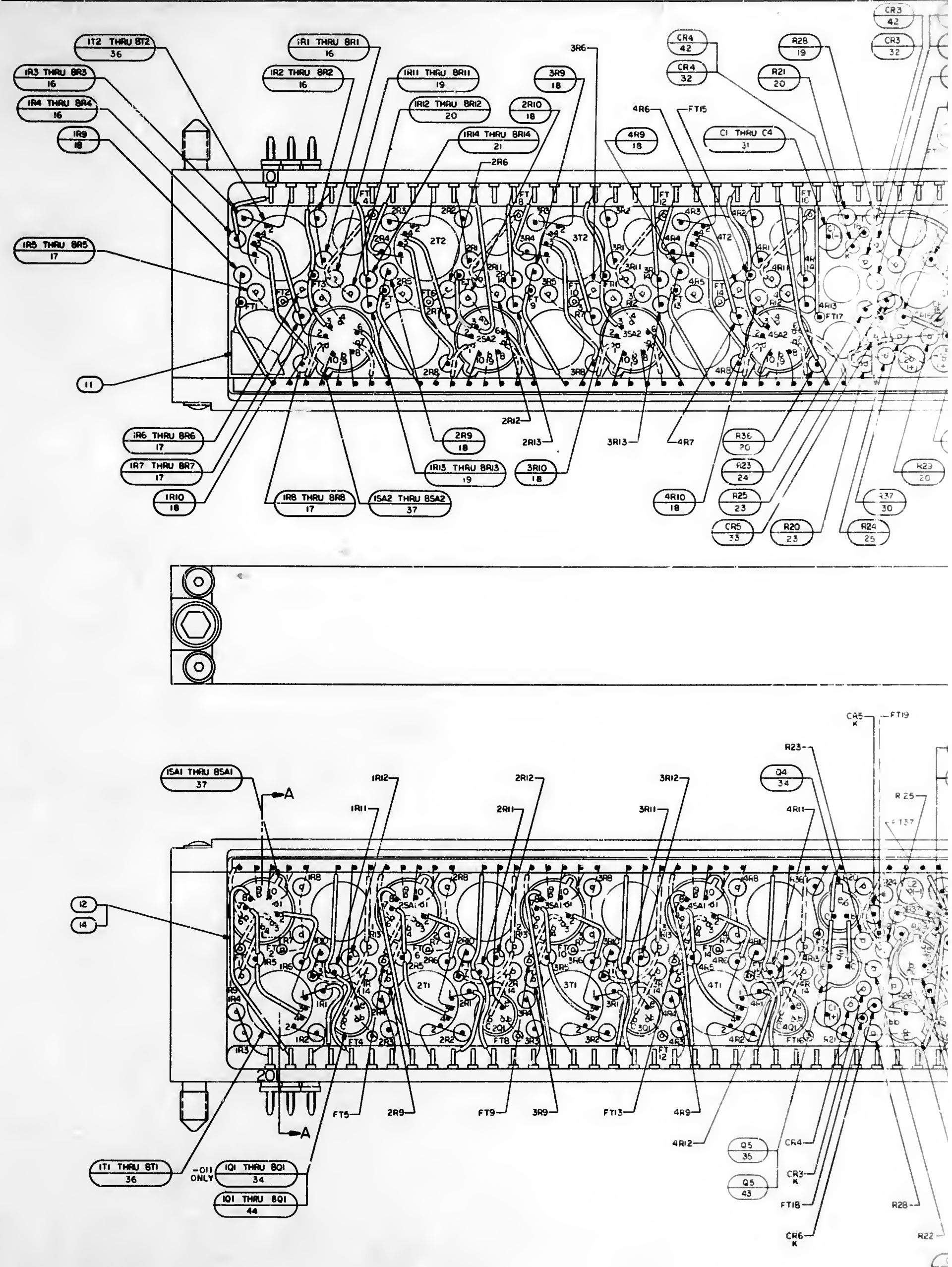
R23, R27, R32	
PART NO.	VALUE
1006750 -32	1K
-33	1.1K
-34	1.2K
-35	1.3K
-36	1.5K
-37	1.6K
-38	1.8K
-39	2.0K
-40	2.2K
-41	2.4K
-42	2.7K
-43	3.0K
-44	3.3K
-45	3.6K
-46	3.9K
-47	4.3K
-48	4.7K
-49	5.1K
-119	1.4K
-121	1.7K
-122	1.9K
-123	2.1K
-124	2.3K
-125	2.55K
-126	2.85K
-127	3.15K
-128	3.45K
-129	3.75K
1006750 -130	4.1K



SECTION B-B



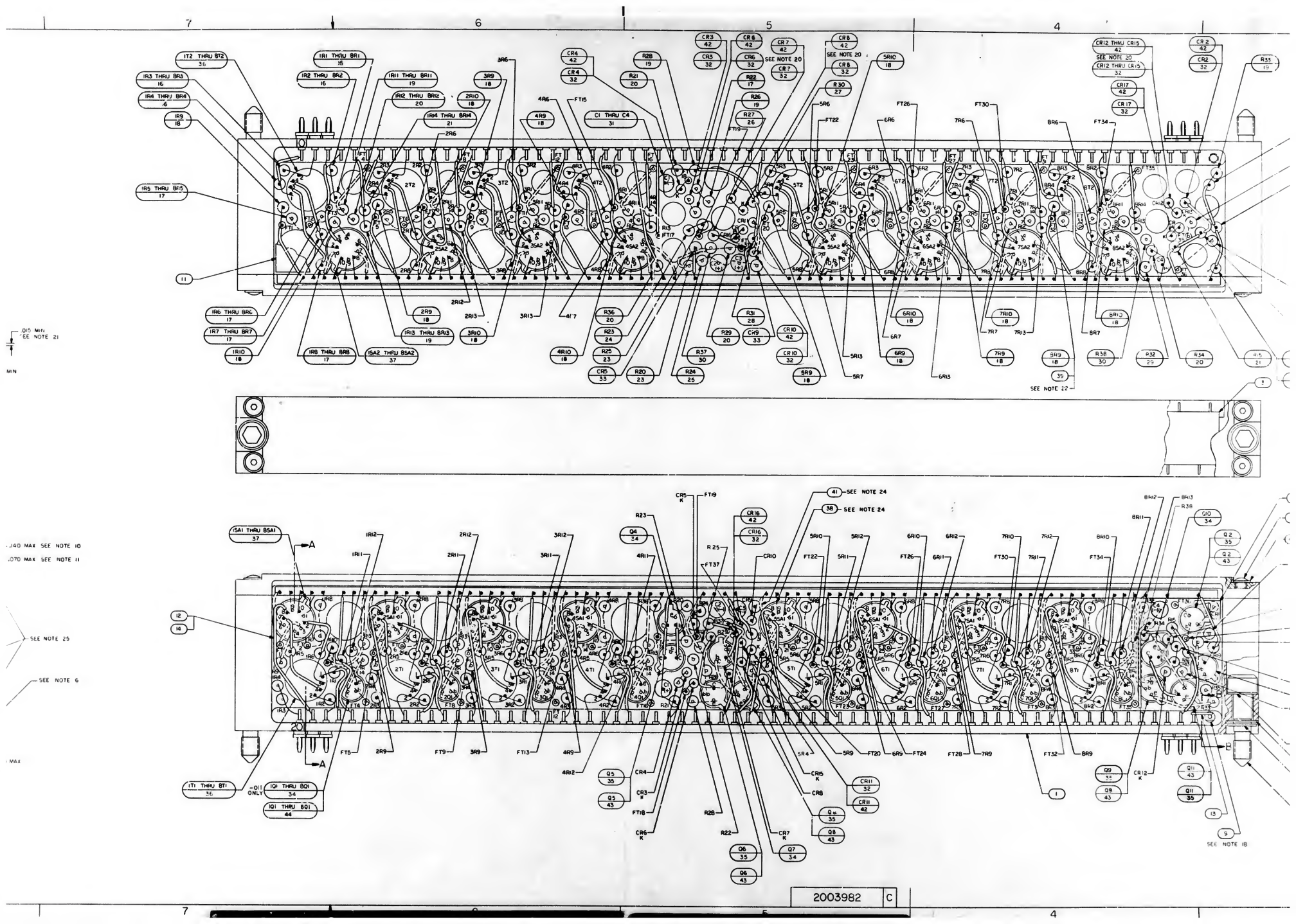
SECTION A-A



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. (+) DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. SEAL INSULATORS AND TERMINALS TO HEADER PER ND1002004, TYPE VI
7. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
8. MARK .26/.24 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-1
9. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH ND1002069
10. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
11. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
12. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. R9, R10, R23, R27 AND R32 TO BE SELECTED FROM APPROPRIATE CHART.
13. STAKE FIND NO. 16 THRU FIND NO. 37 FIND NO. 42, 43 AND 44 TO FIND NO. 1 PER ND1002009 METHOD C OR D
14. ENCAPSULATE PER ND1002002. REMOVE FLASHING
15. WELD PER ND1002005
16. BOND FIND NO. 3 TO FIND NO. 1 PER ND1002004 TYPE I
17. TRIM UNUSED LEAD OF FIND NO 37 .010/.030 FROM CASE
18. MOUNTING TORQUE FOR FIND NO. 9 TO BE 15-20 INCH OUNCES
19. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S. 2003982
20. CR7, 8, 15 AND CR12, 13, 14 ARE TO BE SELECTED BY ELECTRICAL TEST. ONE, TWO, OR THREE DIODES WILL BE SELECTED IN EACH AREA. IF LESS THAN THREE DIODES ARE REQUIRED, FIND NO. 13 AND 15 WILL BE USED IN THE REMAINING COMPONENT HOLES AND WIRING WILL BE COMPLETED AS SHOWN
21. SEAL FIND NO. 9 TO HEADER PER ND1002004, TYPE VI
22. ASSEMBLE FIND NO. 39 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
23. MOUNTING TORQUE FOR FIND NO. 8 TO BE 2.0-2.5 INCH POUNDS
24. USE FIND NO. 38 & FIND NO. 41 WHERE APPLICABLE ON ALL FIRST LEVEL WIRING TO THE MATRIX
25. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER ND1002187, TYPE II
26. APPLY MIL-S-22473, GRADE HV TO FIND NO. 8
27. PAINT SURFACE INDICATED. RED. USING MARKING INK 1006271-1

2003982	C


7
6
5
4
2003982
C

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
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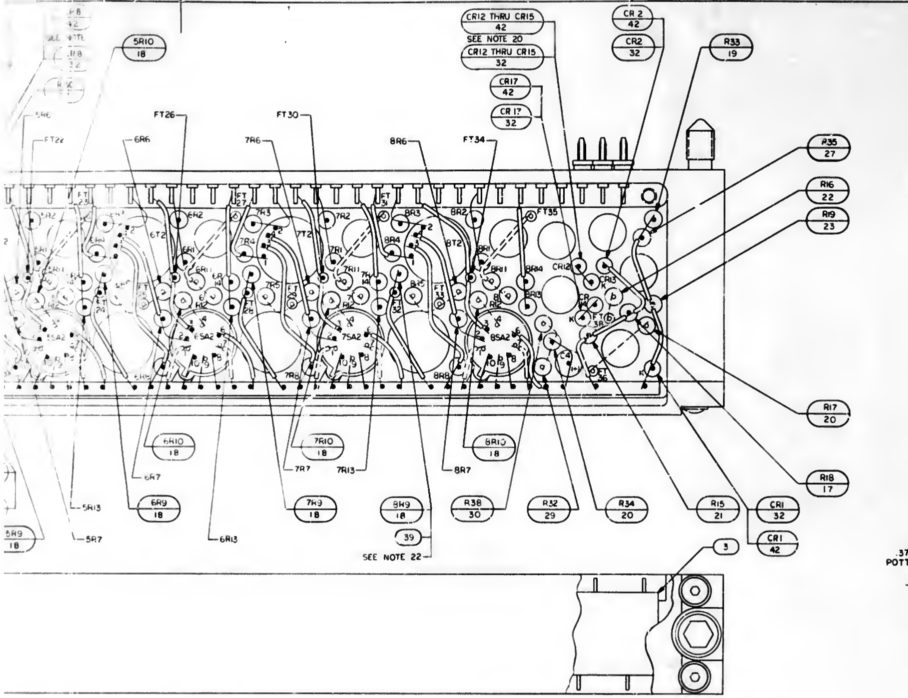
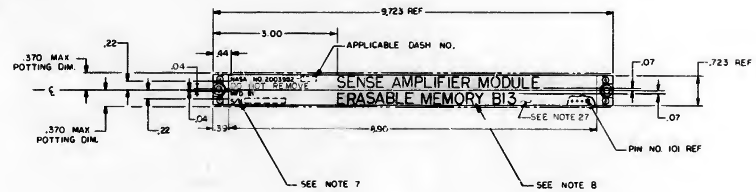
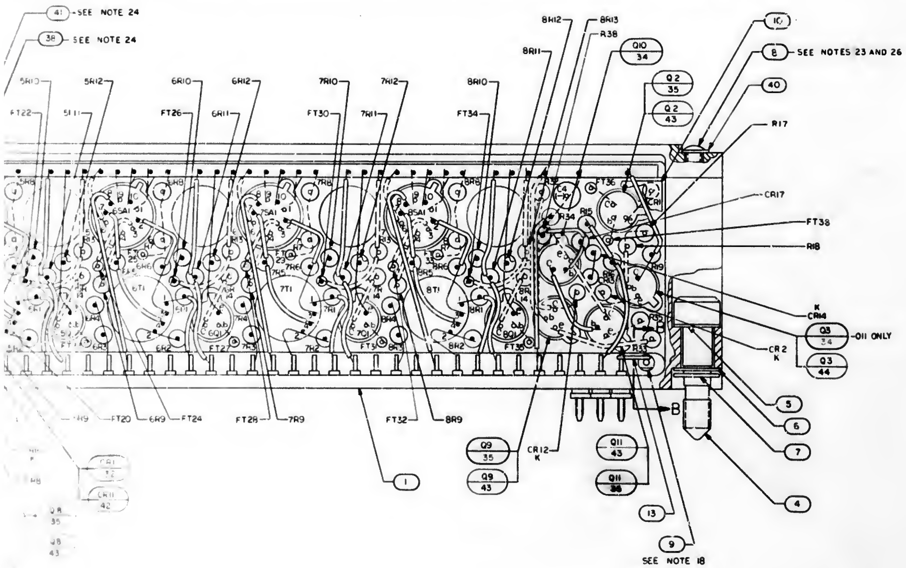
B		REVISED PER TDRR 30687				
C		REVISED PER TDRR 32561				





MARKING VIEW
SCALE 1/1



QTY REQD 021	QTY REQD 011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	—	2005932	SCHEMATIC	REF
—	X	2005920	SCHEMATIC	REF
9	—	2004004-006	TRANSISTOR, POTTED	44
6	—	2004184-001	TRANSISTOR, POTTED	43
15	--	2004183-001	DIODE	42
AR	AR	1006776-25	INSULATION SLEEVING	41
4	4	NAS620A-2	WASHER, FLAT	40
19	19	2004074	WASHER, INSULATOR	39
AR	AR	1006757-12	WIRE, ELECTRICAL	38
16	16	2004003-001	INTEGRATED SENSE AMPL	37
16	16	1006293	TRANSFORMER	36
—	6	2004004-001	TRANSISTOR, POTTED	35
3	12	2004004-002	TRANSISTOR, POTTED	34
2	2	2004112-002	DIODE	33
—	15	2004103-001	DIODE	32
4	4	1006755-69	CAPACITOR	31
2	2	1006750-63	RESISTOR	30
1	1	SEE NOTES 12&22	RESISTOR	29
1	1	1006750-43	RESISTOR	28
2	2	1006750-12	RESISTOR	27
1	1	SEE NOTES 12&22	RESISTOR	26
1	1	1006750-25	RESISTOR	25
1	1	SEE NOTES 12&22	RESISTOR	24
3	3	1006750-36	RESISTOR	23
1	1	1006750-15	RESISTOR	22
9	9	1006750-49	RESISTOR	21
13	13	1005750-39	RESISTOR	20
19	19	1006750-32	RESISTOR	19
16	16	SEE NOTE 12&22	RESISTOR	18
34	34	1006750-24	RESISTOR	17
32	32	1006750-42	RESISTOR	16
AR	AR	1006776-22	INSULATION, SLEEVING	15
AR	AR	1006776-21	INSULATION, SLEEVING	14
AR	AR	1006757-8	WIRE, ELECTRICAL	13
AR	AR	1006757-1	WIRE, ELECTRICAL	12
1	1	2004711	INSULATOR B	11
1	1	2004710	INSULATOR A	10
1	1	2004039	TERMINAL, THREADED	9
4	4	1006783-10	SCREW, BUTTON HEAD	8
2	2	MS16633-4015	RING, RETAINING, EXTERNAL E	7
2	2	2004984-003	WASHER, FLAT	6
2	2	2004984-001	WASHER, FLAT	5
2	2	1004579-1	SCREW, JACKING	4
1	1	2003005-011	MATRIX ASSY	3
1	1	2004044	COVER	2
1	1	2003044-021	HEADER HOUSING ASSY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± — DECIMALS ±.02 ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL —

MIT INSTRUMENTATION LAB, CAMBRIDGE MASS

DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED MSC

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

SENSE AMPLIFIER MODULE, ERASABLE MEMORY B13 ASSEMBLY

CODE IDENT NO 80230 | SIZE J | DRAWING NO 2003982

SCALE 4/1 | SHEET 1 OF 1

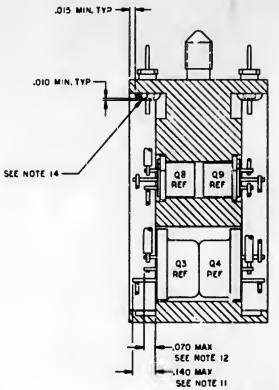
2003982 C

R11,R93	
PART NO.	VALUE
1006750-6	10
1006750-5	27
1006750-1	51
-4	68
-7	91
-9	110
-11	130
-12	150
-13	160
-14	180
-15	200
-16	220
1006750-17	240

R12	
PART NO.	VALUE
1006750-36	1500
-37	1600
-38	1800
-39	2000
-40	2200
1006750-41	2490

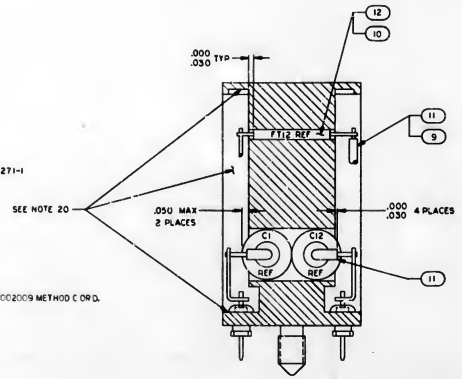
R94	
PART NO.	VALUE
1006750-27	620
-30	820
-32	1000
-34	1200
-35	1300
-36	1500
-37	1600
1006750-38	1800

R3	
PART NO.	VALUE
1006750-128	3480
-45	3600
-129	3750
-46	3900
-130	4100
-47	4300
-131	4500
1006750-48	4700

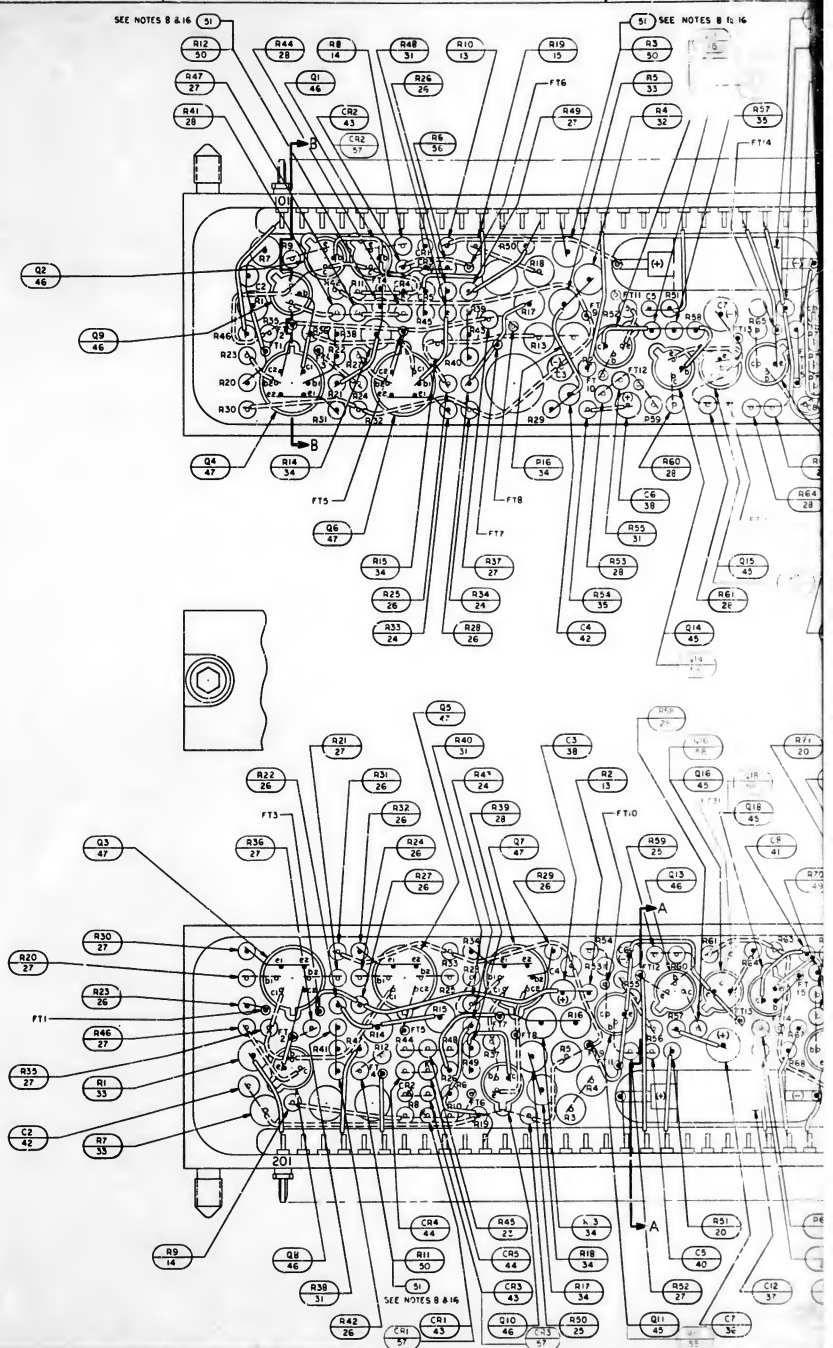


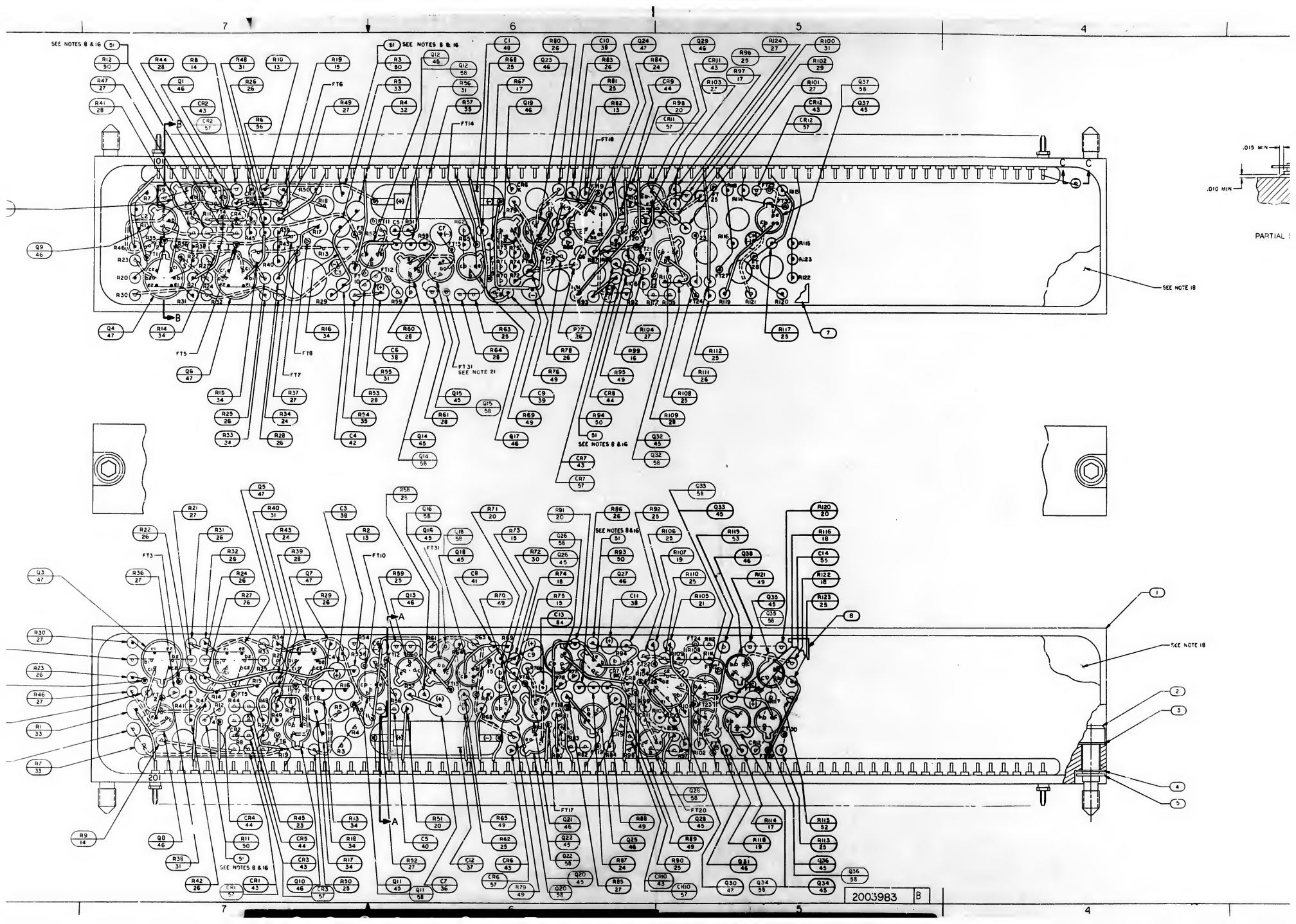
SECTION B-B
FIND NO. 7&8 REMOVED FOR CLARITY

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. AR DENOTES AS REQUIRED
3. FT DENOTES FEED THRU
4. + DENOTES POSITIVE SIDE OF CAPACITOR
5. K DENOTES CATHODE SIDE OF DIODE
6. MARK .10/.08 HIGH WHITE CHARACTERS PER NO1002019 AND NO1002122, TYPE II, CLASS 2 AND SERIALIZE PER NO1002023 USING INK 1006271-1
7. MARK .26/.24 HIGH WHITE CHARACTERS PER NO1002019 AND NO1002122, TYPE II, CLASS 2 USING INK 1006271-1
8. THE VALUE OF THE FOLLOWING COMPONENTS TO BE DETERMINED AT ELECTRICAL TEST. R3, R11, R12, R93 AND R94 TO BE SELECTED FROM APPROPRIATE CHART
9. WELD PER NO1002005
10. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE IN ACCORDANCE WITH NO1002069
11. BLACK DOT AND SINGLE SOLID LEADS INDICATE UPPER LEVEL WIRING
12. WHITE DOT AND SINGLE DOTTED LEADS INDICATE LOWER LEVEL WIRING
13. MOUNTING TORQUE FOR FIND NO. 6 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS AND TERMINALS TO HEADER PER NO1002004, TYPE XII
15. SEAL FIND NO. 6 TO HEADER PER NO1002004, TYPE XII
16. ASSEMBLE FIND NO.51 TO MODULE AFTER SELECTED VALUE HAS BEEN DETERMINED
17. STAKE FIND NOS.13 THRU FIND NO.56 AND FIND NO.62 THRU FIND NO.56 AND FIND NO.57 AND 58 TO FIND NO.1 PER NO1002009 METHOD C OR D.
18. ENCAPSULATE PER NO1022002. REMOVE FLASHING
19. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF P.S 2003983
20. COAT INDICATED SURFACES, BOTH ENDS, TOP AND BOTTOM, BOTH SIDES PER NO1002187, TYPE II
21. STAKE FIND NO. 10 & FIND NO. 12, CENTRALLY. PER NO1002009 METHOD C OR D

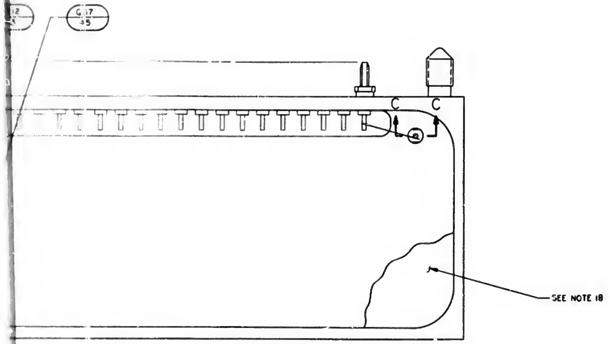


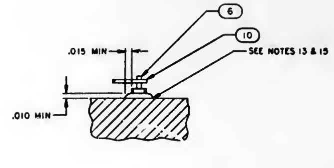
SECTION A-A
FIND NO. 7&8 REMOVED FOR CLARITY



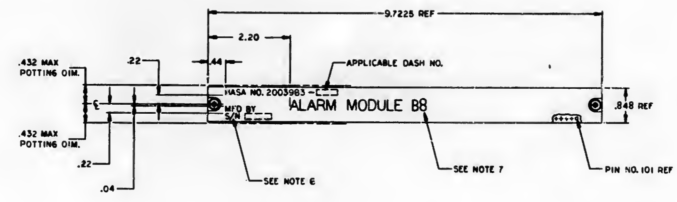

SEE NOTES 8 & 16
SEE NOTE 18
SEE NOTES 8 & 16
SEE NOTE 21
SEE NOTES 8 & 16
SEE NOTES 8 & 16
SEE NOTE 18
.015 MIN
.010 MIN
PARTIAL
2003983
B

REVISIONS						
SYM	ZONE	DESCRIPTION	BY	CHK.	DATE	APPROVED
A		CHANGED PER TDRR 28449				
B		CHANGED PER TDRR 32561	RSJ			

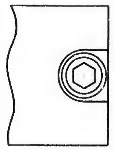


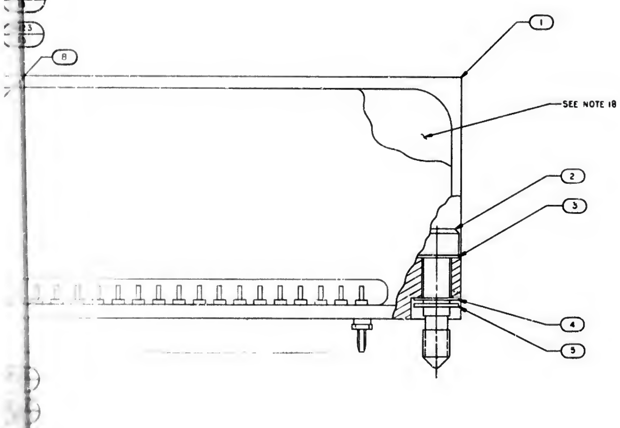


PARTIAL SECTION C-C



MARKING VIEW
SCALE 1/1





QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
☒	—	2005927	SCHEMATIC	REF
—	☒	2005922	SCHEMATIC	REF
16	—	2004184-001	TRANSISTOR	58
8	—	2004183-001	DIODE	57
1	1	1006750-53	RESISTOR	56
1	1	1006755-69	CAPACITOR	55
1	1	1006755-21	CAPACITOR	54
1	1	1006750-50	RESISTOR	53
1	1	1006750-36	RESISTOR	52
5	5	2004074	INSULATOR, WASHER	51
5	5	SEE NOTE 8	RESISTOR	50
9	9	1006750-39	RESISTOR	49
1	1	1006755-128	CAPACITOR	48
7	7	1010376-1	TRANSISTOR	47
15	15	2004004-002	TRANSISTOR	46
—	16	2004004-001	TRANSISTOR	45
4	4	2004112-002	DIODE	44
—	8	2004103-001	DIODE	43
2	2	1006777-23	CAPACITOR	42
1	1	1006777-24	CAPACITOR	41
1	1	1006777-20	CAPACITOR	40
1	1	1006755-79	CAPACITOR	39
4	4	1006755-57	CAPACITOR	38
1	1	1006755-36	CAPACITOR	37
1	1	1006755-31	CAPACITOR	36
2	2	1006788-6	RESISTOR	35
6	6	1010377-227	RESISTOR	34
3	3	1010377-51	RESISTOR	33
1	1	1010377-50	RESISTOR	32
6	6	1006750-84	RESISTOR	31
1	1	1006750-83	RESISTOR	30
1	1	1006750-63	RESISTOR	29
9	9	1006750-58	RESISTOR	28
15	15	1006750-56	RESISTOR	27
17	17	1006750-49	RESISTOR	26
16	16	1006750-47	RESISTOR	25
5	5	1006750-43	RESISTOR	24
1	1	1006750-41	RESISTOR	23
1	1	1006750-33	RESISTOR	21
5	5	1006750-32	RESISTOR	20
2	2	1006750-30	RESISTOR	19
3	3	1006750-25	RESISTOR	18
3	3	1006750-15	RESISTOR	17
1	1	1006750-17	RESISTOR	16
3	3	1006750-8	RESISTOR	15
2	2	1006750-6	RESISTOR	14
3	3	1006750-1	RESISTOR	13
AR	AR	1006776-22	INSULATION, SLEEVING	12
AR	AR	1006776-21	INSULATION, SLEEVING	11
AR	AR	1006757-8	WIRE, ELEC	10
AR	AR	1006757-1	WIRE, ELEC	9
1	1	2003990	INSULATOR B ASSEMBLY	8
1	1	2004719	INSULATOR A	7
1	1	2004039	TERMINAL, THREADED	6
2	2	MS16633-4015	RING, RETAINING, EXTERNAL, "E"	5
2	2	2004984-003	WASHER, FLAT	4
2	2	2004984-001	WASHER, FLAT	3
2	2	1004579-1	SCREW, JACKING	2
1	1	2003032-021	HEADER, HOUSING ASSY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003993	
2003200	

APPLICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± — DECIMALS XX± .02 ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC
DATE

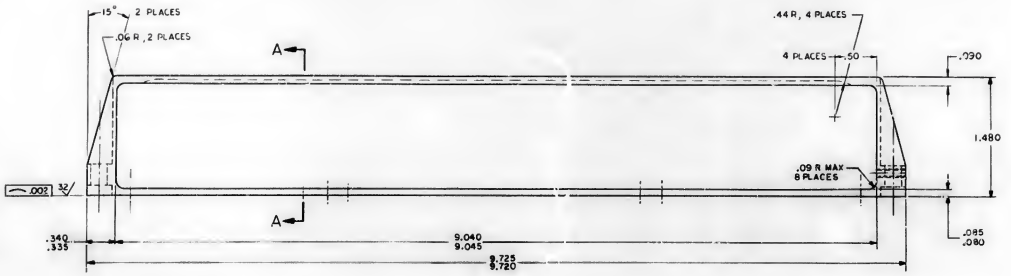
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

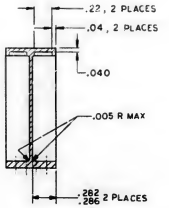
ALARM MODULE
B8
ASSEMBLY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003983

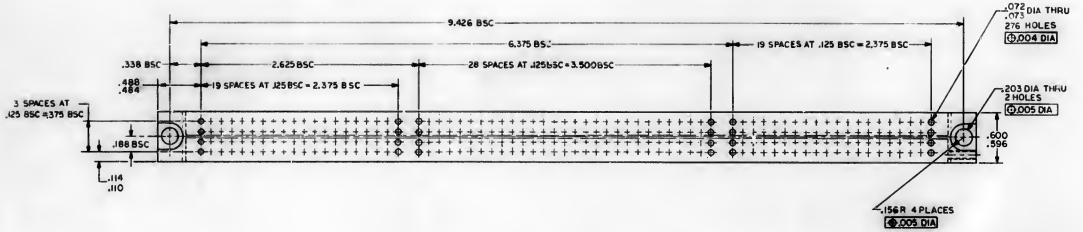
SCALE 4/1 | SHEET 1 OF 1

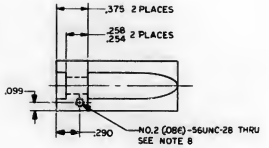
2003983





SECTION A-A





NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MATERIAL: MAG ALLOY ZK60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202E TYPE I, CLASS C
4. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED
5. ALL INSIDE RADII .015/.005 UNLESS OTHERWISE SPECIFIED
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. IDENTIFY WITH DRAWING NO. AND REVISION PER ND1002019
8. TAP HOLE AFTER ANODIZE, COAT PER ND1002040

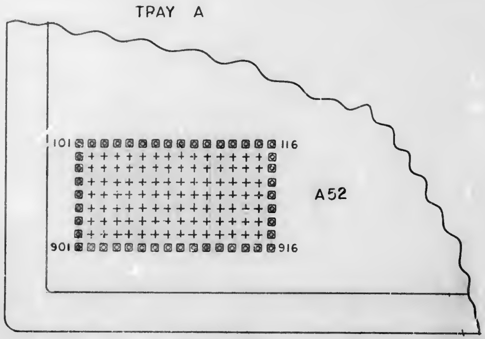
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ±1/32 DECIMALS .XX ±.005 .XXX ±.003 ANGLES ±0°30' DO NOT SCALE THIS DRAWING	SEE NOTE 2
2003000			
NEXT ASSY	USED ON		
APPLICATION			SEE NOTE 3

CITY	MANNED SPACECRAFT CENTER
	HEADER LOGIC MODULE
SIZE	E
	2004039

REVISIONS 22262						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 24046	AA			



WIREWRAP SIDE
SCALE: NONE

101 MDT01	102 MDT02	103 MDT03	104 MDT04	105 MDT05	106 MDT06	107 MDT07	108 MDT08	109 MDT09	110 MDT10	111 MDT11	112 MDT12	113 MDT13	114 MDT14	115 MDT15	116 MDT16
201 MWL01	202 MWL02	203 MWL03	204 MWL04	205 MWL05	206 MWL06	207 MWL07	208 MWL08	209 MWL09	210 MWL10	211 MWL11	212 MWL12	213 MWL13	214 MWL14	215 MWL15	216 MWL16
301 MT01	302 MT02	303 MT03	304 MT04	305 MT05	306 MT06	307 MT07	308 MT08	309 MT09	310 MT10	311 MT11	312 MT12	313 MRULOG	314 MWFBG	315 MWEBG	316 MWBBEG
401 MST1	402 MST2	403 MST3	404 MTCSA/	405 MWSG	406 MWZG	407 MWYG	408 MWQG	409 MWBG	410 MSQ10	411 MSQ11	412 MSQ12	413 MSQ13	414 MSQ14	415 MSQEXT	416 MSQ16
501 MBR1	502 MBR2	503 MIIP	504 MCTRAL/	505 MTCAL/	506 MRPTAL/	507 ALGA	508 MPAL/	509 MSTPIT/	510 MGOJAM	511 MINHL	512 MINKL	513 MWLG	514 MONWT	515 MRSC	516 MRLG
601 STRT1	602 STRT2	603 MNHSBF	604 MNHNC	605 MNHRPT	606 MTCSAI	607 MSTRT	608 MSTP	609 MSBSTP	610 MRDCH	611 MLDCH	612 MGP/	613 MSP	614 MRGG	615 MWAG	616 MRAG
701 CNTRL1	702 CNTRL2	703 MTHI	704 MTLO	705 MWCH	706 MRCH	707 MONPAR	708 MONWBK	709 MWG	710 MNISQ	711 MREQIN	712 MWATCH/	713 MLOAD	714 MREAD	715 MONSOO	716 MPIPAL/
801 BPLSSW	802 +4SW	803	804	805	806	807	808 MSCDBL/	809 NHALGA	810 DOSCAL	811 DBLTST	812 MWARNF/	813 OUTCOM	814 MSCAFL/	815 MOSCAL/	816 MVFAIL/
901 OVDCA	902	903 OVDCA	904	905 OVDCA	906	907 OVDCA	908	909 OVDCA	910	911 OVDCA	912	913 OVDCA	914	915 OVDCA	916

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL

NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN A. Di Leo
CHECKED
APPROVED
APPROVED
APPROVED MIT

NOT REQUIRED PER LETTER NAS 9-4065-612

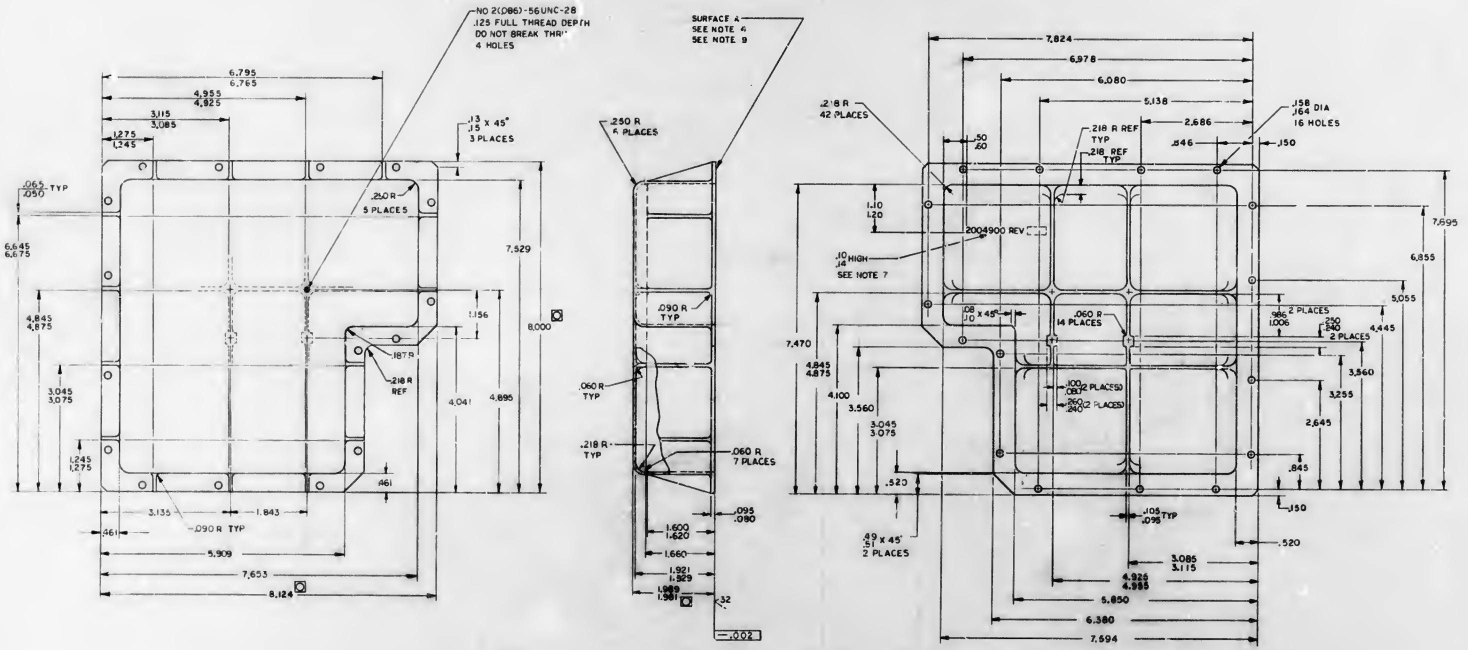
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIGNAL PIN ASSIGNMENT CONNECTOR A52

CODE IDENT NO. 80230 | SIZE D | DRAWING NO. 2004152
SCALE | SHEET 1 OF 1

2004900 A

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22781 DR CHK APPD		



NOTES

1. MATL: 7075-T6 AL PER QQ-A-250/12, TEMP T6
2. REMOVE BURRS AND SHARP EDGES .005/.020
3. SURFACE FINISH 125 EXCEPT WHERE OTHERWISE SHOWN
4. CHROMATE SURFACE A PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. ▢ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
7. MARK AS SHOWN WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-11
8. ANODIZE PER MIL-A-8625 TYPE II, DYED BLACK EXCEPT SURFACE A AND HOLES
9. NO SCRATCHES PERMISSABLE ON SURFACE A
10. IDENTIFY WITH PART NO. PER ND1002019

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
2003985	
2003900	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 1
HEAT TREATMENT: NONE
FINAL FINISH: SEE NOTE 4

MIT INSTRUMENTATION LAB, Cambridge, Mass.
DRAWN / CHECKED / APPROVAL / APPROVAL / NASA APPROVAL / MIT APPROVAL / MIT APPROVAL

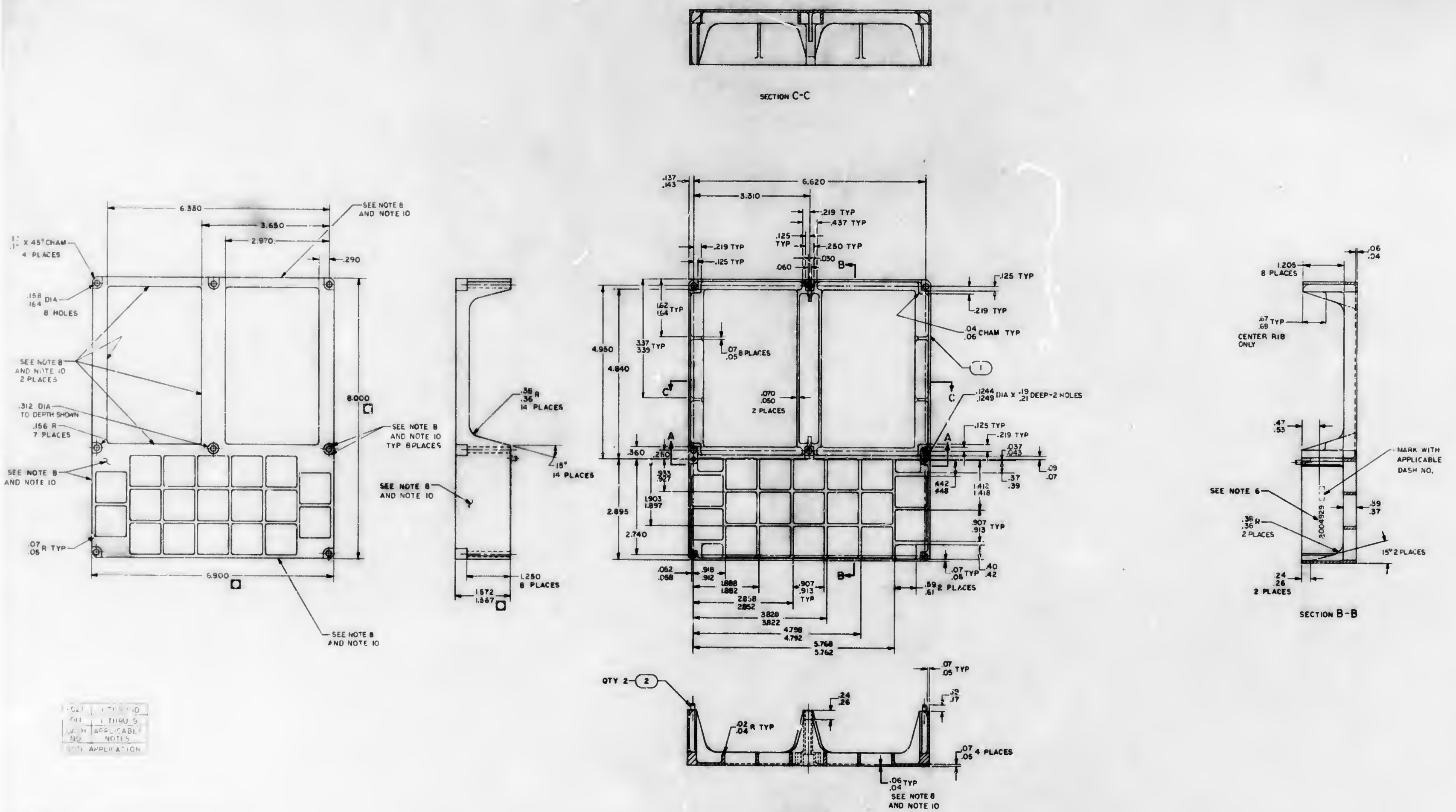
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

COVER, REAR
AGC DSKY

CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 2004900
SCALE 1/1 | WT | SHEET 1 OF 1

2004929 D

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22313 DR CHK APPD		
B	REVISED PER TDRR 22547 DR CHK APPD		
C	REVISED PER TDRR 22738 DR CHK APPD		
D	REVISED PER TDRR 28178 DR CHK APPD		



NOTES

1. MATL 6061-T6-AL PER QQ-A-250/11, TEMP 6
2. REMOVE BURRS AND SHARP EDGES .005/.015
3. ALL SURFACES 125/
4. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARK .14 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-10
7. DIMENSIONS CONTROLLED BY ICD MH01 5 116
8. INDICATED SURFACES WITH 1008809 GRAY EPOXY ENAMEL PER 1002279
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
10. INDICATED SURFACES PER ND-002277 ... 3-003

QTY REQD	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	2	MS16555-625	PIN, DOWEL	2
1	1	2004929-001	COVER, FRONT	1
021	011	LIST OF MATERIALS		

NEXT ASSY	USED ON
2003950	
2003985	
3003900	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±2°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 1
HEAT TREATMENT: NONE
FINAL FINISH: SEE NOTES 4 & 8

MIT INSTRUMENTATION LAB
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NASA APPROVAL / MIT APPROVAL / MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

COVER, FRONT
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO 2004929
SCALE 1/1 | WT | SHEET 1 OF 1

2004929 D